WATER RECYCLING – AN IMPORTANT COMPONENT OF WISE WATER MANAGEMENT

Summary | Background | Findings | Recommendations | Responses | Attachments

SUMMARY

San Mateo County's more than 720,000 residents are almost completely dependent on the Hetch Hetchy regional water system, a system vulnerable to drought and changing weather patterns. Facing an expanding population and a limited water supply, San Mateo County (County)[1] and its 20 cities and towns (Cities) must reduce their residents' dependence on imported water by diversifying their water supply sources. One way to diversify is through the increased use of recycled water.

Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

Water recycling reduces regional dependence on imported water by providing a local, drought-resistant water source. It enhances water quality by reducing discharges to and diversions from ecologically sensitive water bodies. It is environmentally sustainable and has a smaller energy footprint than most other water supply sources.

The 2012-2013 San Mateo County Civil Grand Jury (Grand Jury) investigated recycled water use and found that only the cities of Daly City and Redwood City have implemented water recycling programs. The cities of Brisbane, Foster City, Pacifica, San Bruno, South San Francisco, and San Mateo have water recycling programs under consideration. The cities of Atherton, Belmont, Burlingame, Colma, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Portola Valley, San Carlos, and Woodside, plus the County, do not currently plan to develop water recycling programs. East Palo Alto did not respond to the Grand Jury's survey.

The Grand Jury recommends that Daly City and Redwood City study expansion of their programs into other non-potable uses of recycled water, as well as geographic expansion of their distribution system. The Grand Jury recommends the cities of Brisbane, Foster City, Pacifica, San Bruno, South San Francisco, and San Mateo finalize their feasibility studies and develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns. The Grand Jury recommends the remaining Cities and the County engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing programs for recycling water.

BACKGROUND

Population growth and climate change put at risk the reliability and sustainability of the water supply that many of us take for granted. Our region's imported water supplies, while still capable

[1] The term "County" in this report refers to the government of the County or the geographic area of the County, as appropriate to the context in which it is used.

of meeting demands during years of normal rainfall, are increasingly less reliable when rainfall is below normal. This problem will continue to worsen as more people and businesses move into the region thereby increasing the demand for water. The *San Francisco Bay Area Integrated Regional Water Management Plan* [2] highlights the growing imbalance between water supply and demand and provides a blueprint for improving the region's water supply reliability. The plan emphasizes a multi-faceted approach to addressing regional water problems and sets forth a core strategy of increasing the amount of water recycling in the region.

On February 3, 2009, the California State Water Resources Control Board (State Water Board) adopted a policy encouraging the use of recycled water. The State Water Board found that recycled water, when used in compliance with the policy, Title 22, Division 4, Chapter 3 of the California Code of Regulations (CCR), and all applicable state and federal water quality laws, is safe, and strongly supports its use.[3]

With regional and state support for recycled water, the Grand Jury sought to determine what efforts the County and Cities were undertaking to promote and develop programs for recycling water.

METHODOLOGY

The Grand Jury collected information about water recycling programs in the County via a survey sent to the County Public Works director and each of the Cities' managers. The Grand Jury conducted online research and interviewed representatives from Redwood City, the Bay Area Water Supply and Conservation Agency (BAWSCA), and the South Bayside System Authority. The Grand Jury also toured the South Bayside System Authority treatment facility, the Redwood City recycled water pump station, and a site in Redwood City using recycled water for irrigation.

DISCUSSION

The Need for Recycled Water

According to the City/County Association of Governments (CCAG) Energy Strategy 2012 document,[4] the County and Cities' water supply systems may not be able to meet the challenges of population growth and climate change. The San Francisco Public Utilities Commission, operator of the Hetch Hetchy Aqueduct, estimates that the County and Cities will need an additional 5 million gallons of water per day by 2018 to meet projected demands. In order to meet this demand, the County and Cities will need to implement cost-effective and feasible water conservation and recycling programs.

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[2] "San Francisco Bay Area Integrated Regional Water Management Plan," http://bairwmp.org/plan/executive-summary (Dec. 19, 2012).

[3] California Recycled Water Policy, http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/ (Dec. 19, 2012).

[4] "San Mateo County Energy Strategy 2012," http://www.ccag.ca.gov/pdf/USTF/reports/Draft%20County%20Energy%20Strategy.pdf (Dec. 19, 2012).

The County and Cities must diversify their water supply sources and reduce their residents' dependence on water from the Hetch Hetchy regional water system. Recycled water is one of the keys to reducing potable water use. Recycled water can augment water supplies, reduce the impacts and costs of wastewater disposal, and restore and improve sensitive natural environments. Water recycling would help the County and Cities realize the water conservation goals established in the California "20x2020 Water Conservation Plan," that requires urban water suppliers to reduce potable water use 20% by the year 2020.[5]

What is Recycled Water?

Recycled water is wastewater (sewage) treated to remove solids and certain other impurities, such as metals and ammonia, so the water can be used in landscape irrigation and industrial processes, or to recharge groundwater aquifers. The term "recycled water" is synonymous with "reclaimed water" or "reused water."

The Recycling Process

Sanitary sewer systems in the County (Appendix A) deliver wastewater to treatment plants where it progresses through varying degrees of treatment. The end use will dictate whether the wastewater receives primary, secondary, or tertiary treatment and disinfection. (Appendix B)

A dual piping network that keeps recycled water pipes completely separate from drinking water pipes distributes the recycled water to various end users.[6] Effective June 1, 1993, all pipes designed to carry recycled water must be purple, or wrapped in distinctive purple tape and labeled as recycled water.[7]

Historical Use of Recycled Water

Water recycling has been a part of California's water management plan for more than 100 years.

In the early 1900s, partially treated wastewater and groundwater transformed San Francisco's Golden Gate Park from an area of sand and waste to a garden spot. In the 1930s, construction began on the McQueen Treatment Plant in Golden Gate Park to provide secondary-treated recycled water for park irrigation. This practice continued until 1978 when the McQueen plant stopped operating because it did not meet the new state standards for irrigation use.[8]

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[5] California State Water Resources Control Board - 20x2020 Agency Team on Water Conservation, http://www.swrcb.ca.gov/water_issues/hot_topics/20x2020/index.shtml (Dec. 19, 2012).

[6] Wikipedia - Reclaimed Water, http://en.wikipedia.org/wiki/Reclaimed_water (Dec. 19, 2012).

[7] "California Health Laws Related to Recycled Water", http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Recharge/Purplebookupdate6-01.PDF (Dec. 19, 2012).

[8] San Francisco Water - Recycled Water, http://www.sfwater.org/index.aspx?page=141 (Dec. 19, 2012).

In 1929, Los Angeles County began using recycled water for landscape irrigation in parks and golf courses.[9]

In 1967, the Irvine Ranch Water District (IRWD) began recycling water at its Michelson Water Reclamation Plant. In 1991, IRWD became the first in the nation to obtain health department permits for the interior use of recycled water for flushing toilets and other non-potable uses.[10]

Current Use of Recycled Water

Californians use recycled water for a variety of purposes including irrigation, toilet flushing, construction, water features, dust control, cooling and air conditioning, soil compaction, commercial laundry, car washing, fire sprinkler systems, and sewer and street cleaning. (Appendix C) ***Recycled water must not be used for drinking, bathing, or swimming pools!***

In addition to commercial customers, residential customers are increasingly using recycled water. In southern California, virtually all new residential development serviced by the IRWD are required to use recycled water for landscape irrigation. In northern California, Vintage Greens in Windsor is equipped with dual piping that enables homeowners to use recycled water outside and potable water indoors.[11]

At sites using recycled water for irrigation, signs are displayed warning people not to drink from the irrigation system.

Some local governments, such as Los Angeles and Orange County, are using recycled water for indirect, potable groundwater supply augmentation. The recycled water is pumped into groundwater aquifers, is pumped out, treated again, and then finally used as drinking water. The term for this process is "groundwater recharging."[12]

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[9] http://en.wikipedia.org/wiki/Reclaimed_water

[10] Ibid.

[11] "Recycled Water: Safe, Successful Use in Hundreds of Cities in California and Throughout America," A Summary Report prepared by the Redwood City Public Works Department, http://www.datainstincts.com/images/pdf/cacities.pdf (Dec. 19, 2012).

[12] http://en.wikipedia.org/wiki/Reclaimed_water

Benefits of Recycled Water

Water recycling reduces regional dependence on imported water by providing a local, drought-resistant water source. It enhances water quality by reducing discharges to and diversions from ecologically sensitive water bodies. It is environmentally sustainable and has a smaller energy footprint than most other water supply sources. Recycled water requires about one-eighth the energy required for seawater desalination, less than one-half the energy used by the San Francisco regional water system to bring water to the Bay Area, and one-half to three-quarters the energy required to pump groundwater.[13]

The Importance of Educating the Public about Recycled Water

The public is more likely to support the use of recycled water when it understands its role in water management objectives. Education must focus on the environmental and economic benefits of recycled water, while addressing public health risk concerns.

Redwood City has a comprehensive program for educating the public about recycled water. The City uses printed materials and engages in public outreach activities in order to increase the public's understanding and acceptance of recycled water. Redwood City also requires that all recycled water site supervisors attend a Site Supervisor Certification Workshop.

Safety Concerns about Recycled Water

When used properly and for its intended use, recycled water is safe. A 2005 study titled, "Irrigation of Parks, Playgrounds, and Schoolyards with Reclaimed Water," found that there had been no incidences of illness or disease from either microbial pathogens or chemicals, and the risks of using recycled water for irrigation were not measurably different from irrigation using potable water. Studies by the National Academies of Science and the Monterey Regional Water Pollution Control Agency, have found recycled water to be safe for agricultural use.[14]

State law regulates the production and use of recycled water. Title 22, Division 4, Chapter 3 of the CCR establishes water quality and public health requirements for recycled water. The California Department of Public Health is responsible for establishing these requirements and regional water quality control boards are responsible for their enforcement. In addition, Title 17, Division 1, Chapter 5 of the CCR establishes requirements to prevent cross connections between recycled water systems and drinking water systems. State and local health departments enforce these regulations.[15]

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[13] "Importance of Recycled Water to the San Francisco Bay Area" - Bay Area Recycled Water Coalition http://www.barwc.org/files/LinkClick.pdf (Dec. 19, 2012).

[14] http://en.wikipedia.org/wiki/Reclaimed_water

[15] California Department of Public Health Regulations Related to Recycled Water - January 2009, http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/RWregulations-01-2009.pdf (Dec. 19, 2012).

Cost Concerns about Recycled Water

Most recycled water projects are cost competitive with other water management options when the full range of benefits is considered. For example, the State Recycled Water Task Force, which convened in 2001, estimated that the cost of a recycled water program averaged about $1,025 per acre-foot (325,853 gallons). The Task Force noted this cost was comparable to costs of other water supply options, including new dams, reservoirs, and desalination. The Task Force's average unit cost estimate is very close to the average unit cost of 26 Bay Area recycled water projects evaluated in 2005. Collectively, the Bay Area projects had an average unit cost between $1,000 and $1,200 per acre-foot.[16]

People often use unequal comparisons when evaluating the relative cost of recycled water. For example, the cost of recycled water at the customer's *location* gets compared to the cost of other water supplies at their *source*, without taking into account the transmission, treatment, and distribution costs associated with moving water from its source to the customer's location. Cost comparisons with other supply options commonly ignore differences in delivery reliability and do not account for the cost of wastewater disposal and environmental impact.[17]

Federal, state, and local funding is available to help offset the cost of designing, constructing, and operating water recycling systems. Federal funding is available through the U.S. Bureau of Reclamation under Title XVI of the 1992 Reclamation Wastewater and Groundwater Study & Facilities Act (PL 102-575).[18] State grants are available from a variety of sources including the State Water Board and the California Department of Water Resources.[19] Local funding can include municipal debt repaid through utility rate increases, impact fees, or special assessments.

Cost of Recycled Water to the End User

To encourage the use of recycled water, end users often receive a discount on their water utility bills.[20] Redwood City, for example, uses the following recycled water pricing policy:

- **For existing irrigation meters/accounts that connect to recycled water:** Twenty five percent discount on monthly water utility bills beginning with the first billing period following connection to the Recycled Water Project. Discount shall apply to prevailing drinking water rates and charges in effect at the time of physical connection. The City will perform and pay for customer site retrofits related to landscape irrigation.

- **For existing industrial meters/accounts that connect to recycled water:** Forty percent discount on monthly water utility bills beginning with the first billing period following

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[16] http://www.barwc.org/files/LinkClick.pdf

[17] Ibid.

[18] US Department of the Interior/Bureau of Reclamation – Title XVI (Water Reclamation and Reuse) Program, http://www.usbr.gov/lc/socal/titlexvi.html (Dec. 19, 2012).

[19] California State Water Resources Control Board – Water Recycling Funding Program, http://www.waterboards.ca.gov/water_issues/programs/grants_loans/water_recycling/ (Dec. 19, 2012).

[20] http://en.wikipedia.org/wiki/Reclaimed_water

connection to the Recycled Water Project. Discount shall apply to prevailing drinking water rates and charges in effect at the time of physical connection. Customers will pay for and perform all facilities retrofits for industrial uses.

The North San Mateo County Sanitation District, a subsidiary district of the City of Daly City, also charges its customers using recycled water less than it charges customers using potable water.

The Need for Regional Collaboration

The growing imbalance between water supply and demand is a statewide problem, not just a problem in the County. Nevertheless, local water recycling projects are necessary to develop the infrastructure and public acceptance for a regional program.

While there is tremendous opportunity for recycled water in the County, there are numerous regional challenges that need to be addressed in order for local governments to realize the potential benefits of recycled water. These challenges include securing federal and state participation in regional projects, coordinating local water plans and projects for regional benefits, resolving jurisdictional constraints, improving public understanding of recycled water, and addressing health risk misconceptions.[21]

BAWSCA is one agency that helps to coordinate local water plans and projects. BAWSCA represents the interests of 24 cities and water districts and 2 private utilities in Alameda, Santa Clara, and San Mateo counties that purchase water wholesale from the San Francisco regional water system.[22] BAWSCA has initiated work on a long-term reliable water supply plan. This plan will quantify the projected water supply needs of its member agencies through year 2035 and identify water supply management projects that meet those needs. BAWSCA has also been helpful in coordinating the inclusion of local water recycling projects in regional packages submitted for state grant funding.

[21] http://www.barwc.org/files/LinkClick.pdf

[22] Bay Area Water Supply and Conservation Agency, http://bawsca.org/about/ (Dec. 19, 2012).

Summary of Recycled Water Survey Responses

Existing Recycled Water Programs	
Daly City/ North San Mateo County Sanitation District	The North San Mateo County Sanitation District, a subsidiary district of Daly City, began delivering recycled water to commercial customers in August 2004. The distribution system consists of 4.85 miles of distribution pipeline, 2 pump stations, and 1.4 million gallons of storage. The geographic area served is Northern San Mateo County and the Southwest portion of the City/County of San Francisco through contractual agreements with its golf clubs. This represents 4.2% of the Sanitation District's geographic area. At maximum production, 41% of the Sanitation District's sewage effluent becomes recycled water. Median landscape and playing field irrigation, sewer main flushing, and turf irrigation at the Olympic, San Francisco, Lake Merced, and Harding Park Golf Clubs are the primary uses for the recycled water. Actual usage billed in hundred cubic feet units (748 gallons) determines the charges for recycled water. There are plans to conduct supplementary tests in the winter/spring 2012-2013 to determine if Colma cemeteries, Park Merced, and San Francisco State University can receive recycled water.
Redwood City	In 2002, Redwood City began planning for the development of a citywide recycled water system to address the very real possibility of severe water shortages in the coming years. The city had been exceeding its Hetch Hetchy water allotment and was searching for a way to use less water. In 2003, the City formed a Community Task Force on Recycled Water to build community support for the project. Initial opposition to the project centered on the safety of children at playgrounds and parks. Physical construction of the recycled water project began in 2005. Phase I of the project became operational in 2010. The distribution system consists of 15+ miles of distribution pipeline, 1 pump station, and 4.36 million gallons of storage. The geographic area served includes Redwood Shores and Seaport. This represents 50% of the geographic area of Redwood City. Currently, Redwood City uses 6% of its sewage effluent as

	recycled water. In 2011, the city saved 169 million gallons of potable water. Redwood City uses recycled water for commercial and residential irrigation, dust control, water features, car washing, and sewer lift station cleaning. Actual usage by metering determines the charges for recycled water. Phase II of the Recycled Water Project calls for expansion into the area west of US 101. In the future, Redwood City can deliver recycled water to adjacent cities.
Recycled Water Projects under Consideration	
Brisbane	Brisbane has a proposed recycled water project under environmental review. The project known as "Brisbane Baylands" is approximately one square mile of underdeveloped brownfield southwest of Candlestick Park on the west side of US 101. Irrigation and toilet flushing within commercial buildings will be the primary uses of the recycled water.
Foster City	Foster City, the Estero Municipal Improvement District, and the City of San Mateo are preparing a Wastewater Treatment Plant Master Plan that will explore the feasibility of producing recycled water. The expected completion date is May 2013.
Pacifica	Pacifica, through a contract with the North Coast County Water District, plans to deliver recycled water for irrigation to Sharp Park Golf Course, Fairway Ballpark, Oceana High School and Ingrid B. Lacy Middle School fields, and the Beach Boulevard Promenade in the Spring of 2013. This represents 10% of its geographic jurisdiction. The recycled water system includes one pump station, three miles of distribution pipeline, and a 400,000-gallon tank. Pacifica anticipates potable water savings of 50 million gallons each year. Recycled water rates will be less than potable water rates.
San Bruno and South San Francisco	San Bruno owns and operates a Water Quality Control plant jointly with South San Francisco. In 2009, a Recycled Water Feasibility Study was completed. A program for recycling water could be operational in the year 2020. The proposed facilities would include approximately four miles of distribution pipe, a 1.4 million gallon per day tertiary treatment system, and two storage tanks. Landscape irrigation at parks and schools in the service area, including the Golden Gate

	National Cemetery and Commodore Park in San Bruno, will be the primary uses for the recycled water.
City of San Mateo	The City of San Mateo is performing a market analysis to identify demand for recycled water. The city plans to serve low-lying areas, encompassing 30-50% of the city's geographic area. Irrigation would be the main use of recycled water.
Cities/Towns Not Planning on Developing Recycled Water Programs	
Atherton	Atherton stated that CalWater handles its water issues.[23] The West Bay Sanitary District collects Atherton's sewage and the South Bayside System Authority treats it.
Belmont	Belmont is not involved in water distribution or wastewater treatment and does not have the infrastructure to undertake such function. The South Bayside System Authority treats its wastewater.
Burlingame	Burlingame uses a small amount of recycled water at the wastewater treatment plant for washing down equipment, but has no plans to develop a program for distributing recycled water.
Colma	Colma does not have a sewer treatment plant, nor is it a water purveyor. Therefore, the revenue source to fund a capital improvement, such as the infrastructure for a recycled water system, becomes very unlikely. Colma would be interested in recycled water for irrigation purposes. The North San Mateo County Sanitation District, a subsidiary district of Daly City, plans to conduct supplementary tests in the winter/spring 2012-2013 to determine if Colma cemeteries can receive recycled water.
Half Moon Bay	The Sewer-Authority Mid-Coastside or the Coastside County Water District is the agency that would implement a program for recycling water. These agencies are responsible for wastewater treatment and water distribution respectively within the city limits of Half Moon Bay.
Hillsborough	Hillsborough does not plan to recycle water. The adjacent cities of Burlingame and San Mateo treat Hillsborough's sewage.

[23] The Grand Jury has limited legal authority to investigate private utility companies such as CalWater.

Menlo Park	Menlo Park did not cite a reason for not developing a program.
Millbrae	Millbrae, from 1988 to 2009, used recycled water for landscaping at the US 101/Millbrae Avenue interchange. The practice stopped in 2009 due to renovations at the city's wastewater treatment plant. The city has one pump station and less than one mile of distribution pipe. The city currently has no plans to expand the distribution system stating that it would be cost prohibitive to do so.
Portola Valley	CalWater provides Portola Valley's water service and the West Bay Sanitary District provides its wastewater service. Neither of these utilities have plans to construct a recycled water system to serve Portola Valley.
San Carlos	San Carlos cited the distance to the treatment facility and overall cost as reasons for not pursuing a recycled water program.
Woodside	Woodside did not cite a reason for not developing a program.
County of San Mateo	Recycled water programs usually exist at large-scale wastewater treatment facilities. The County does not operate any large-scale wastewater treatment facilities.

Survey Non-Responders

East Palo Alto did not respond to the Grand Jury's survey on Recycled Water.

FINDINGS

F1. There is a growing imbalance in the County and the region between water supply and demand.

F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

F4. Properly produced and used, recycled water poses little or no public health risk.

F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

RECOMMENDATIONS

The 2012-2013 San Mateo County Civil Grand Jury recommends that, the ***City Councils of Daly City and Redwood City*** do the following, on or before June 30, 2014:

R1. Study expansion of their programs into other non-potable uses of recycled water.

R2. Study geographic expansion of their recycled water distribution systems.

The Grand Jury recommends that the ***City Councils of Brisbane, Foster City, Pacifica, San Bruno, South San Francisco, and San Mateo*** do the following, on or before June 30, 2014:

R3. Finalize current feasibility studies.

R4. Actively pursue partnerships for producing and distributing recycled water.

R5. Develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns.

The Grand Jury recommends that the ***County Board of Supervisors and the City/Town Councils of Atherton, Belmont, Burlingame, Colma, East Palo Alto, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Portola Valley, San Carlos, and Woodside*** do the following, on or before June 30, 2015:

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

R7. Conduct any studies that may be required to develop a program for recycling water.

REQUEST FOR RESPONSES

Pursuant to Penal code section 933.05, the Grand Jury requests the following to respond to the foregoing Findings and Recommendations referring in each instance to the number thereof:

- County Board of Supervisors
- Each City/Town Council in the County

The governing bodies indicated above should be aware that the comment or response of the governing body must be conducted subject to the notice, agenda, and open meeting requirements of the Brown Act.

Reports issued by the Civil Grand Jury do not identify individuals interviewed. Penal Code Section 929 requires that reports of the Grand Jury not contain the name of any person or facts leading to the identity of any person who provides information to the Civil Grand Jury.

APPENDIX A

Sewage Collection Systems within Each Treatment Plant Service Area in the County

Treatment Plant Operator	**Collection System Operator ****	**Serves Unincorporated Area**	**County District ***
North San Mateo County Sanitation District	City of Daly City Town of Colma Westborough County Water District	X	
City of Pacifica	City of Pacifica		
Sewer Authority Mid-Coast	City of Half Moon Bay Montara Sanitary District Granada Sanitary District	 X X	
City of San Francisco-Southeast Treatment Plant	City of Brisbane Bayshore Sanitary District Guadelupe Valley Municipal Improvement District	 X	
South San Francisco-San Bruno	City of South San Francisco City of San Bruno	X	
Airports Commission, City and County of San Francisco	San Francisco International Airport	X	
City of Millbrae	City of Millbrae		
City of Burlingame	City of Burlingame Burlingame Hills Sewer Maintenance District Town of Hillsborough (part)	X	X
City of San Mateo-Estero Municipal Improvement District	Town of Hillsborough (part) City of San Mateo Crystal Springs County Sanitation District Estero Municipal Improvement District	X	X

Treatment Plant Operator	Collection System Operator **	Serves Unincorporated Area	County District *
South Bayside System Authority	City of Belmont		
	City of San Carlos		
	Harbor Industrial Sewer Maintenance District	X	X
	Scenic Heights County Sanitation District	X	X
	Devonshire County Sanitation District	X	X
	City of Redwood City		
	Edgewood Sewer Maintenance District	X	X
	Emerald Lake Heights Sewer Maintenance District	X	X
	Fair Oaks Sewer Maintenance District	X	X
	Kensington Square Sewer Maintenance District	X	X
	Oak Knoll Sewer Maintenance District	X	X
	West Bay Sanitary District	X	
City of Palo Alto	East Palo Alto Sanitary District		

Source: San Mateo County Planning Division

* The County Public Works Department provides sewer collection services for residents and businesses in the ten sewer maintenance and sanitation districts within the County.

The County does not operate sewage treatment facilities.

** Sewage from all districts flows through the downstream agency's pipes to the wastewater treatment plant. All districts have agreements with the downstream agencies to pay for the use of their pipes and treatment.

APPENDIX B

RECYCLED WATER USES* ALLOWED IN CALIFORNIA

This summary is prepared by WateRuse Association of California, from the December 2, 2000, Title 22 adopted **Water Recycling Criteria**, and supersedes all earlier versions.

Recycled Water Use	Treatment Level: Disinfected Tertiary Recycled Water	Disinfected Secondary 2.2 Recycled Water	Disinfected Secondary 23 Recycled Water	Undisinfected Secondary Recycled Water
Other Uses:				
Groundwater Recharge	ALLOWED under special case-by-case permits by **RWQCB**[4]			
Flushing toilets and urinals	ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Priming drain traps				
Industrial process water that may contact workers				
Structural fire fighting				
Decorative fountains				
Commercial laundries				
Consolidation of backfill material around potable water pipelines				
Artificial snow making for commercial outdoor use				
Commercial car washes, not heating the water, excluding the general public from the washing process				
Industrial process water that will not come into contact with workers		ALLOWED	ALLOWED	
Industrial boiler feed				
Nonstructural fire fighting				
Backfill consolidation around nonpotable piping				
Soil compaction				
Mixing concrete				
Dust control on roads and streets				
Cleaning roads, sidewalks and outdoor work areas				
Flushing sanitary sewers				ALLOWED

* Refer to the full text of the the December 2, 2000 version Title 22: **California Water Recycling Criteria**. This chart is only an informal summary of the uses allowed in this version. Adapted for use in Site Supervisor Training Workshops by **South Bay Water Recycling**, San Jose, California. October 29, 2002. Jerry Brown, Workshop Coordinator. The complete and final 12/02/2000 version of the adopted criteria can be downloded from:

<http://dhs.ca.gov/ps/ddwenm/publications/regulations/recycleregs_index.htm>

[2] With "Conventional tertiary treatment". Additional monitoring for two years or more is necessary with direct filtration.

[3] Drift eliminators and/or biocides are required if public or employees can be exposed to mist.

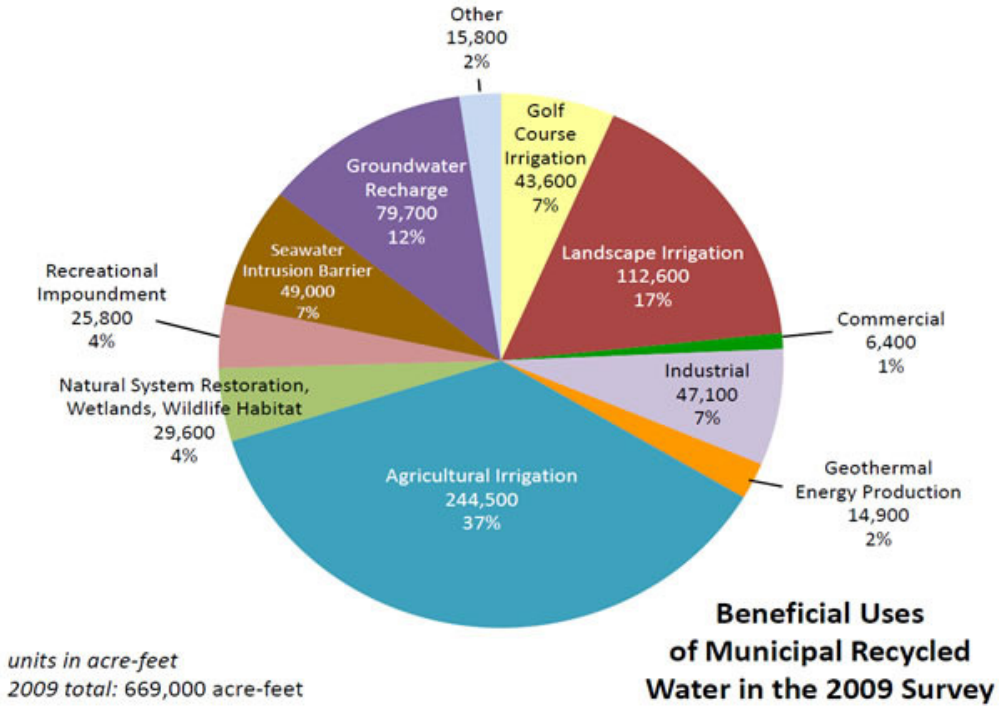
[4] Refer to Groundwater Recharge Guidelines, available from the California Department of Health Services.

WateReuse Association of California • (916) 442-2746 • www.watereuse.org/h2o

APPENDIX C

2009 Municipal Wastewater Survey Results

(Conducted by the State Water Resources Control Board and the Department of Water Resources)



An acre-foot is the amount of water needed to cover one acre to a depth of one foot. It is equivalent to 325,853 gallons

Golf Course Irrigation = Public and private courses

Landscape Irrigation = Non-golf course related landscape irrigation, including buildings, highways, shcools, and parks

Commercial = Business use, such as laundries and office buildings

Industrial = Manufacturing facilities, cooling towers

Geothermal Energy Production = Augmentation of geothermal fields

Agricultural Irrigation = Pasture or crop irrigation

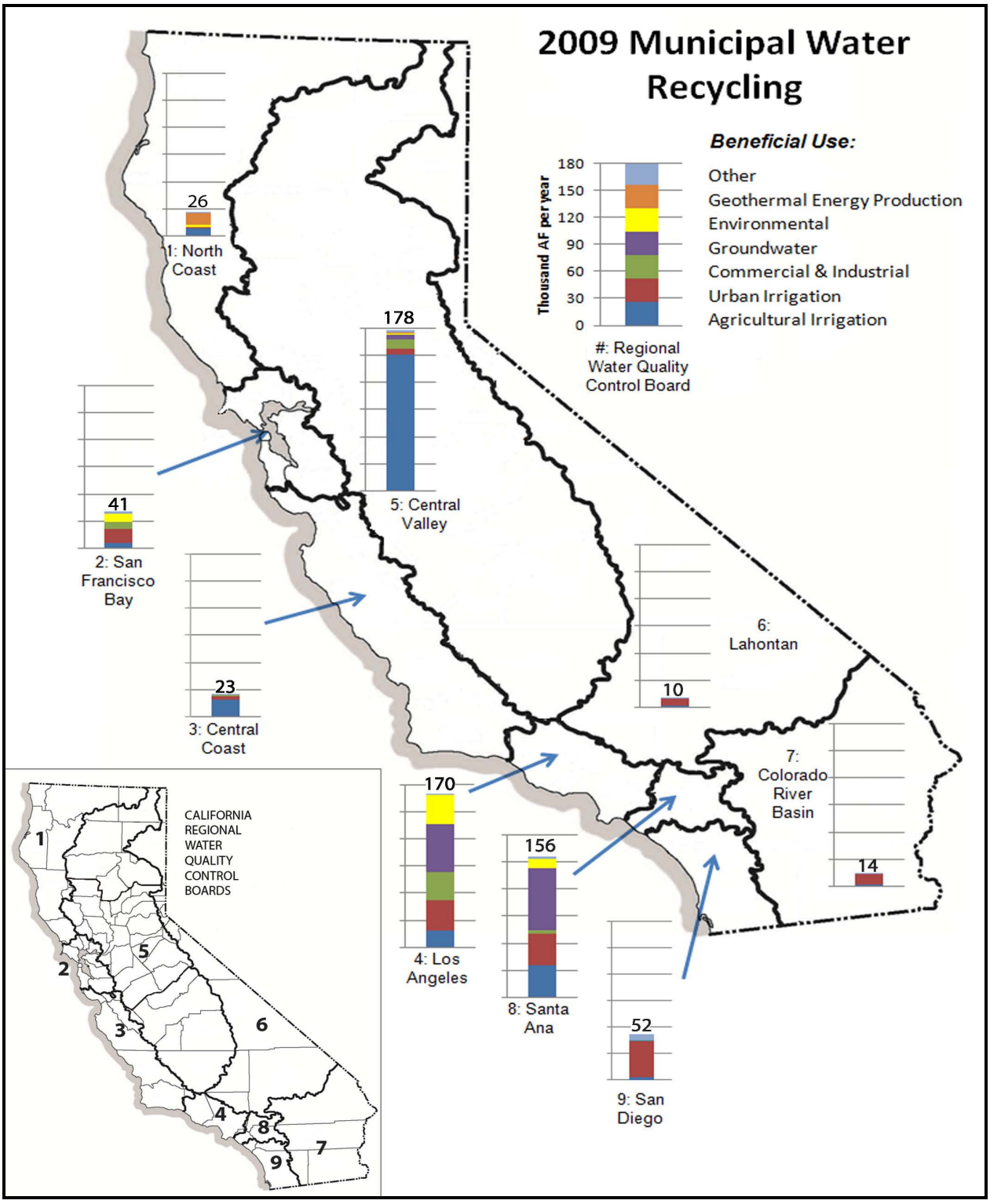
Natural System Restoration, Wetblands, Wildlife Habitat = Addition to wetlands

Recreational Impoundment = Addition to recreational lakes

Seawater Intrustion Barrier = Groundwater injection to prevent or reduce seawater intrusion

Groundwater Recharge = Recharge basins to augment depleted groundwater aquifers

Other = Construction Use, dust control, or unknown



Issued: March 6, 2013

County Manager's Office

BOARD OF SUPERVISORS
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JUN 06 2013

COUNTY OF SAN MATEO

John L. Maltbie
COUNTY MANAGER/
CLERK OF THE BOARD

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WEB PAGE ADDRESS: http://www.smcgov.org

(650) 363-4123
FAX: (650) 363-1916

May 28, 2013

Hon. Richard C. Livermore
Judge of the Superior Court
Hall of Justice
400 County Center, 2nd Floor
Redwood City, CA 94063-1655

Re: Water Recycling- An Important Component of Wise Water Management

Dear Hon. Richard C. Livermore,

The responses to the Grand Jury Reports titled: Water Recycling- An Important Component of Wise Water Management, was approved by the San Mateo County Board of Supervisors at their regular meeting on May 21, 2013. Attached please find the Board Memo that includes the formal response.

Sincerely,

Shanna Collins

Shanna Collins
County Manager's Office

COUNTY OF SAN MATEO
Inter-Departmental Correspondence
County Manager

APPROVED BY
BOARD OF SUPERVISORS

MAY 21 2013
CLERK OF BOARD
BY _____ DEPUTY

Date: March 8, 2013
Board Meeting Date: May 21, 2013
Special Notice / Hearing: None
Vote Required: Majority

To: Honorable Board of Supervisors

From: John L. Maltbie, County Manager

Subject: 2012-13 Grand Jury Response- Water Recycling- An Important Component of Wise Water Management

RECOMMENDATION:
Approve the Board of Supervisor's response to the 2012-13 Grand Jury report titled: Water Recycling- An Important Component of Wise Water Management.

BACKGROUND:
On March 6, 2013, the Grand Jury filed a report titled: Water Recycling- An Important Component of Wise Water Management. The Board of Supervisors is required to submit comments on the findings and recommendations pertaining to the matters under control of the County of San Mateo within ninety days. The County's response to the report is due to Hon. Richard C. Livermore no later than June 4, 2013.

Acceptance of this report contributes to the Shared Vision 2025 outcome of a Collaborative Community by ensuring that all Grand Jury findings and recommendations are thoroughly reviewed by the appropriate County departments and that, when appropriate, process improvements are made to improve the quality and efficiency of services provided to the public and other agencies.

DISCUSSION:
The County operates two small water systems located in remote and rural areas of the County with a combined customer base of approximately 168 accounts. The water systems rely upon surface water and groundwater. Water conservation by customers is partially influenced by the existing water rate structure.

The County operates ten sewer/sanitation districts of varying size that serve predominately unincorporated areas. The County sewer/sanitation districts rely on downstream agencies for the treatment of the sewage generated by the districts' customers. Additionally, the County's sewer/sanitation districts serve predominately

residential areas and are located a significant distance from the wastewater treatment plants.

Findings:

F1. There is a growing imbalance in the County and the region between water supply and demand.

Response: Disagree in part. The report provides information and statistics, including information from the San Francisco Public Utilities Commission (SFPUC) regarding future projected demands. The water systems operated by the County do not rely upon water from the SFPUC for their customers. What has been written in the report is acknowledged, but not directly pertinent to the County operated water systems.

F2. The County and cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

Response: Disagree in part. The County operated water systems do not rely on imported water. Diversification of water supply sources for the County water systems could be considered, but options for importation of water to these remote locations is not feasible.

F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and cities maintain a safe and reliable water source.

Response: Disagree in part. Water recycling can be a valuable option for some locations and applications to reduce the reliance on drinking water for non-potable water needs. However, there are limitations on the uses of recycled water, and future demand for potable water will very likely outpace the future demand for recycled water.

F4. Properly produced and used, recycled water poses little or no public health risk.

Response: Disagree in part. Wastewater treatment plants (WWTP) are designed to treat sewage (biological waste) through a series of treatment stages to clean the water so it may be released to the Bay, Ocean, or other receiving waters. WWTPs that receive strictly sewage are not designed to remove some of the constituents that may occur in sewage based on customers' behavior and habits. As an example, unwanted pharmaceuticals should not be discarded down the toilet or sink as WWTPs are not designed to remove these types of materials. Prescription medicines should be discarded at designated receptacles or thrown in the garbage. In addition to pharmaceuticals, there are other inappropriate materials that may be discarded in the sewer systems, which may not be removed during the WWTP processing. With proper signage, plumbing, and usage the public health risks can be minimized.

F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

Response: Agree in part. Although public education to alert consumers of the appropriate uses of recycled water is beneficial, greater benefit will be gained through educational efforts on water conservation. Easily accessible educational materials regarding water conservation is an important message for all consumers. In addition to the availability of information, ensuring the general public practices water conservation in their homes and businesses is an important step toward reducing water consumption. Providing the public with information regarding the water sources they rely on, the limitations of the sources, conservation strategies for inside and outside, and local recycled water projects may influence their behavior.

F6. The County and cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

Response: Agree in part. Collaborative arrangements for recycled water projects where feasible (based on location), effectiveness (based on type of application), and financially attainable could be beneficial.

Recommendations:

The Grand Jury recommends that the County Board of Supervisors do the following, on or before June 30, 2015:

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

Response: As stated, the County operates two small remote water systems and does not operate a WWTP. Development of a program for producing and distributing recycled water should be led by the cities, WWTP owners and operators, and large water purveyors. A program would likely focus on providing recycled water to areas relatively close to WWTPs that rely on a significant amount of water for landscaping or outside use. In general, the County does not have unincorporated areas that are consistent with these criteria. Should other agencies work to develop a program, the County can be engaged to determine whether their participation is feasible.

R7. Conduct any studies that may be required to develop a program for recycling water.

Response: Based on the information provided in R6, the County is not the appropriate party to conduct the recommended studies. It is incumbent upon the cities, WWTP owners and operators, and large water providers to perform the recommended studies.

FISCAL IMPACT:
There is no Net County Cost associated with approving this report.

Town of Atherton
Office of the Mayor
91 Ashfield Road
Atherton, California 94027
Phone: (650) 752-0500
Fax: (650) 614-1212

April 18, 2013

Grand Jury Foreperson
c/o Court Executive Office
400 County Center
Redwood City, CA 94063-1655

SUBJECT: GRAND JURY REPORT
"WATER RECYCLING – AN IMPORTANT COMPONENT OF WISE WATER MANAGEMENT"

Attention Jury Foreperson:

Attached please find the Town of Atherton's response to the above noted Grand Jury Report. Pursuant to California Penal Code Section 933.05, the response was considered by the City Council at a public meeting on April 17, 2013.

Should you have any questions concerning this response, please contact City Manager George Rodericks at (650) 752-0504.

Sincerely,

TOWN OF ATHERTON

Elizabeth Lewis
Mayor

Town of Atherton
Office of the Mayor
91 Ashfield Road
Atherton, California 94027
Phone: (650) 752-0500
Fax: (650) 614-1212

April 25, 2013

Report Title: *Water Recycling – An Important Component of Wise Water Management*
Report Date: March 6, 2013
Response by: Town of Atherton
By: Elizabeth Lewis, Mayor

FINDINGS:

- I (we) agree with the findings numbered: n/a
- I (we) disagree wholly or partially with the findings numbered: n/a

RECOMMENDATIONS:

- Recommendations numbered n/a have been implemented.
  (Attach a summary describing implemented actions.)
- Recommendations numbered R6 & R7 have not yet been implemented, but will be implemented in the future.
  (Attach a timeframe for implementation.)
- Recommendations numbered n/a require further analysis.
  (Attach an explanation and the scope and parameters of an analysis or study, and a timeframe for the matter to be prepared for discussion by the officer or director of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This timeframe shall not exceed six months from the date of publication of the grand jury report.)
- Recommendations numbered n/a will not be implemented because they are not warranted or are not reasonable.
  (Attach an explanation.)

Date: 10/3/13 Signed: Elizabeth Lewis

RECOMMENDATIONS

R6: Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

The Town has an active Environmental Programs Committee. This Committee will be tasked to engage active discussions with local water purveyors and wastewater treatment providers and present alternatives to the City Council for consideration. If studies are required, the City Council will consider development of such studies in support of water recycling programs as budget and priorities allow.
As suggested by the Grand Jury Report, such discussions will begin on or before June 30, 2015.

R7: Conduct any studies that may be required to develop a program for recycling water. If studies are required, the City Council will consider development of such studies in support of water recycling programs as budget and priorities allow.

May 28, 2013

CALIFORNIA
CITY OF BELMONT

Superior Court of California, County of San Mateo
Hall of Justice and Records
400 County Center; 2nd Floor
Redwood City, CA 94063-1655

Hon. Richard C. Livermore:

At its meeting on May 28, 2013 , the City Council of the City of Belmont approved the following response to the 2012-2013 Grand Jury Report, "Water Recycling-An Important Component of Wise Water Management":

Grand Jury Finding F1. There is a growing imbalance in the County and the region between water supply and demand.

City Response: The City agrees that there are reports on regional water supply and demand projections indicating that water demand will exceed water supply in the region over time. However, the City is not involved in water supply and distribution planning and management.

Grand Jury Finding F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

City Response: Effective methods to reduce residents' dependence on imported water can vary from community to community. The City of Belmont therefore does not agree that it is a necessity for every city in the region, and it should be evaluated on case by case bases.

Grand Jury Finding F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

City Response: The City of Belmont agrees with this finding. The City cannot comment to the safety and reliability of recycled water as it's not involved in water management planning.

Grand Jury Finding F4. Properly produced and used, recycled water poses little or no public health risk.

City Response: The City cannot comment to the safety and reliability of recycled water as it's not involved in water and wastewater treatment, and recycled water distribution. The City of Belmont agrees that there are various studies, and health and safety regulations governing the use of recycled water.

Grand Jury Finding F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

City Response: The City of Belmont agrees that education programs are necessary in the communities where recycled water is part of an overall water management strategy.

Grand Jury Finding F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

City Response: Collaborative arrangements may benefit the County and Cities, however the short and long term benefits will vary from city to city based on each city's overall water management strategy and capital cost for a separate treatment and distribution systems.

Grand Jury Recommendations and Belmont's Responses to Recommendations

Grand Jury Recommendation R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

City Response: *City of Belmont is not involved in water supply and distribution planning and management, therefore City* will consult and defer the feasibility of developing a program for producing and distributing recycled water to its local water purveyor and wastewater treatment service provider.

Grand Jury Recommendation R7. Conduct any studies that may be required to develop a program for recycling water.

City Response: The City of Belmont does not agree with recommendation R7 to conduct any studies that may be required to develop a program for recycling water as the City is not involved in water distribution or wastewater treatment.

If you have any questions, please contact us me at (650) 595-7469.

Sincerely,

Leticia Alvarez, P.E.
Assistant Public Works Director/City Engineer

CITY OF BRISBANE

50 Park Place
Brisbane, California 94005-1310
(415) 508-2100
Fax (415) 467-4989

June 3, 2013

Hon. Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center; 2nd Floor
Redwood City, CA 94063-1655

Subject: Response to 2012-2013 Grand Jury 3/6/13 report "Water Recycling – An Important Component of Wise Water Management"

Dear Judge Livermore,

Thank you for the opportunity to review and comment on the findings of the Grand Jury. This letter serves as the City of Brisbane's response to the findings and recommendations found therein. Please note this report was approved by the Brisbane City Council at its June 3, 2013 meeting.

Findings

Grand Jury Finding 1

F1. There is a growing imbalance in the County and the region between water supply and demand.

CITY RESPONSE TO FINDING 1

The city disagrees partially with the finding. While we concur that growth in demand for water from increased population, business and irrigation sectors will lead to a need for water sources in addition to water from the Hetch Hetchy System (HH), we also note that both the San Francisco Public Utilities Commission and the Bay Area Water Supply & Conservation Agency have been working for many years to identify the future volume of water needed in addition to that from HH, and are actively engaged in ensuring that the difference between volume available from HH and demand from all future sectors is met. The use of the phrase "growing imbalance" without considering the context of ongoing regional water supply planning efforts, including the blueprint for improving regional water supply reliability noted in the Grand Jury Report, creates the unnecessary potential for this finding to be viewed in an alarmist light

Grand Jury Finding 2

F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

CITY RESPONSE TO FINDING 2

The city generally agrees with the finding relative to diversifying water supply sources (especially if the other potable and non-potable options in addition to recycled water [RW] are discussed), but we note that the majority of San Mateo County is expected to continue to rely on Hetch Hetchy water as their primary source of water for potable uses. We believe that a more holistic statement would include comments on the use of conservation efforts to minimize any wasting of HH water, in addition to the discussion of other sources.

Grand Jury Finding 3

F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

CITY RESPONSE TO FINDING 3

The city concurs with this finding.

Grand Jury Finding 4

F4. Properly produced and used, recycled water poses little or no public health risk.

CITY RESPONSE TO FINDING 4

The city has not conducted its own independent research on this matter, but based on the fact that state law allows the use of recycled water, we concur with this finding.

Grand Jury Finding 5

F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

CITY RESPONSE TO FINDING 5

Again, the city has not conducted its own independent research on this matter, nor have we commenced any public outreach on possible future RW use within our city limits, but we

note the importance of providing informational material to our citizens, specifically as it relates to the introduction of new programs. The city concurs with this finding.

Grand Jury Finding 6

F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

CITY RESPONSE TO FINDING 6

The city disagrees partially with this finding. While the finding may be correct on a case-by-case basis, the city notes that the September 2008 Carollo report "Recycled Water Feasibility Study", estimated that recycled water produced at a South San Francisco wastewater treatment plant would result in a cost of more than $4,000 per acre-foot to provide RW service to Brisbane. The finding appears to not be correct for every city and the county, but we have no objection to the creation of such collaborative arrangements for those agencies that would benefit from them.

Recommendations

Grand Jury Recommendation 3

R3. Finalize current feasibility studies.

CITY RESPONSE TO RECOMMENDATION 3

The recommendation is expected to be implemented after completion of the CEQA review underway for the proposed "Baylands" project, which is expected to include an onsite recycled water plant. A timeline is not presently available for completion of that review, or for commencement of any follow-on technical studies and development agreements.

Grand Jury Recommendation 4

R4. Actively pursue partnerships for producing and distributing recycled water.

CITY RESPONSE TO RECOMMENDATION 4

The recommendation will not be implemented. As noted in response to Finding 6, a collaborative arrangement will not be beneficial to the city. However, the city does expect that the developer of the proposed "Baylands" project will provide an onsite recycled water plant, with RW to be used for irrigation purposes at minimum, and possibly also for "black water" (toilet flushing) in commercial buildings.

Grand Jury Recommendation 5

R5. Develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns.

CITY RESPONSE TO RECOMMENDATION 5

The recommendation is expected to be implemented in advance of the recycled water plant discussed in response to Recommendation 4. No timeline is currently available for that project.

Please call me at (415) 508-2131 if there are any questions regarding this matter.

Very truly yours,

RL Breault

Randy L. Breault, P.E.
Director of Public Works/City Engineer

Cc: Brisbane City Clerk
Grand Jury website (sent via email to grandjury@sanmateocourt.org)

The City of Burlingame

CITY HALL - 501 PRIMROSE ROAD
BURLINGAME, CALIFORNIA 94010-3997

TEL: (650) 558-7200
FAX: (650) 556-9281
www.burlingame.org

May 6, 2013

Hon. Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center; 2nd Floor
Redwood City, CA 94063-1655

Subject: City of Burlingame Response to Grand Jury Report: "Water Recycling – An Important Component of Wise Water Management" San Mateo County, California

Hon. Richard C. Livermore:

The City of Burlingame is pleased to submit this Response to the 2013 San Mateo County Grand Jury Report "Water Recycling – An Important Component of Wise Water Management." This response was approved by the Burlingame City Council at its meeting on May 6, 2013. The Grand Jury Findings and Recommendations and the City's responses to each are provided below.

Grand Jury Finding F1. There is a growing imbalance in the County and the region between water supply and demand.

City Response: Regional water supply and demand projections developed by BAWSCA indicate that water demand will exceed water supply in the region. With the assumption that these projections are accurate, the City of Burlingame agrees with this finding.

Grand Jury Finding F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

City Response: The necessity to diversify water supply sources in order to reduce dependence on imported water supplies varies from community to community, depending on each water agency's existing water supply portfolio. The City of Burlingame therefore does not agree that it is a necessity for every city.

Grand Jury Finding F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

City Response: The City of Burlingame agrees with this finding; recycled water can be an important component of an overall water supply portfolio.

Grand Jury Finding F4. Properly produced and used, recycled water poses little or no public health risk.

City Response: If produced and used in accordance with existing regulations (such as Title 22, Division 4, Chapter 3 of the California Code of Regulations ("CCR") and Title 17, Division 1, Chapter 5 of the CCR), the City agrees that recycled water likely poses little or no public health risk; however the City has not conducted a literature review to develop an independent opinion on this topic.

Grand Jury Finding F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

City Response: The necessity of recycled water education programs varies from community to community. Educational programs are more important to communities currently with recycled water programs than those without. Further, regional educational programs may provide a benefit for cities that are developing or planning to develop recycled water programs.

Grand Jury Finding F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

City Response: Collaborative arrangements to jointly produce and distribute recycled water may provide cost-benefits associated with economies of scale, however the actual benefit would vary city to city.

Grand Jury Recommendations R1 through R5 are not addressed herein because they pertain to cities and water agencies other than Burlingame. As Burlingame is not responsible for the actions of other water agencies, it cannot respond to such recommendations.

Grand Jury Recommendation R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

City Response: This recommendation has been implemented. In 2011, the City retained the environmental engineering firm Erler & Kalinowski, Inc. ("EKI") to evaluate the feasibility of expanding their recycled water program. The results of this evaluation are documented in "Technical Memorandum – Summary of Recycled Water Supply and Demand Evaluation," dated March 25, 2011 (EKI, 2011), which is provided as an attachment to this letter.

Grand Jury Recommendation R7. Conduct any studies that may be required to develop a program for recycling water.

City Response: Based on the evaluation performed in 2011 (EKI, 2011), it was determined that it is not feasible for the City of Burlingame to develop a recycled water distribution program due to the high capital costs associated with such a project, given an insufficient demand for recycled water. Therefore, this recommendation will not be implemented because it is not warranted or reasonable, at this time.

If you have any questions or need additional information please contact Art Morimoto, Assistant Public Works Director, at (650) 558-7670.

Very truly yours,

THE CITY OF BURLINGAME

Michael Brownrigg
Vice Mayor

Attachment:
EKI, 2011. *Technical Memorandum – Summary of Recycled Water Supply and Demand Evaluation,* prepared for City of Burlingame, dated March 25, 2011

DRAFT

TECHNICAL MEMORANDUM

Summary of Recycled Water Supply and Demand Evaluation

Prepared for:
City of Burlingame
501 Primrose Drive,
Burlingame, California 94010

Prepared by:
Erler & Kalinowski, Inc.
1870 Ogden Drive
Burlingame, California 94010

25 March 2011

(EKI A20031.21)

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Erler & Kalinowski, Inc.

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City of Burlingame, California

Erler & Kalinowski, Inc.

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City of Burlingame, California

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FIGURES:

Erler & Kalinowski, Inc.

Draft Technical Memorandum

Summary of Recycled Water Supply and Demand Evaluation

To: City of Burlingame

Prepared by: Matthew P. Zucca, P.E. (Erler & Kalinowski, Inc.)
C. David Umezaki, P.E. (Erler & Kalinowski, Inc.)

Date: 23 March 2011

Project No.: EKI – A20031.21

1.0 INTRODUCTION

As requested by the City of Burlingame ("City"), Erler & Kalinowski, Inc. ("EKI") has prepared this technical memorandum to summarize its conceptual-level evaluation of the feasibility, costs, and identified issues related to delivering recycled water to customers on the north side of Highway 101 between Broadway Avenue and the Poplar Creek golf course ("Project Area").

The Project Area (Figure 1) was selected by the City because of several factors, including:

- The relatively high concentration of major water users in this area, including hotels, parks, and industrial customers; and
- The fact that the wastewater treatment plant is also located within the Project Area, so that the recycled water distribution system could be maintained within a relatively compact area of the City.

Although located in the City of San Mateo, the Poplar Creek Golf Course and the Coyote Point Recreation Area are considered in this study due to the fact that they are served, at least partially, by water from the City of Burlingame.

2.0 BACKGROUND

The City's wastewater treatment plant ("WWTP") processes wastewater from the City, the unincorporated Burlingame Hills, and the Town of Hillsborough. The City's WWTP currently provides treatment to a disinfected, secondary level. The treated effluent is discharged into the San Francisco Bay through a shared outfall located near South San Francisco.

The WWTP reportedly has average dry weather design flow capacity of 5.5 million gallons per day ("mgd") and can treat up to 16 mgd during the wet weather flow period. However, during wet weather operations, the WWTP's aeration basins and secondary clarifiers are sometimes

bypassed in order to avoid hydraulic overload of the activated sludge process, resulting in a final effluent that is a blend of primary and secondary effluent. The City is currently constructing an on-site storage basin that will be used to store excess wastewater flows during wet weather peaks for later treatment when the influent flow drops below the WWTP's treatment capacity.

Typical average monthly flowrates at the WWTP range from about 3 mgd during dry weather to just under 5 mgd in wet weather, although short-term flowrates can be significantly higher during wet-weather storm events.

3.0 EVALUATION OF POTENTIAL RECYCLED WATER USES

Allowable uses for recycled water in California are described in Title 22 of the California Code of Regulations ("CCR"), Articles 3 and 5.1. These allowable uses have been compiled in the attached Table 1. Under the CCR, there are four treatment levels that dictate the allowable uses for recycled water. These treatment levels are:

- Undisinfected, secondary;
- Disinfected, secondary-23;
- Disinfected, secondary-2,2; and
- Disinfected, tertiary.

The City reportedly uses approximately 300,000 gallons per day ("gpd") of recycled water for internal use within the WWTP. However, the City does not currently use recycled water outside of the WWTP and does not have treatment capabilities to meet the criteria for recycled water suitable for unrestricted reuse.

Of the four treatment levels for recycled water, the treatment level that would be the most suitable for the identified potential recycled users is disinfected, tertiary. As shown in Table 1, the allowable uses for disinfected, tertiary recycled water include:

- Crop irrigation;
- Irrigation of parks and playgrounds;
- Landscaping irrigation;
- Recreational impoundments;
- Landscape impoundments;
- Industrial or commercial cooling; and
- Assorted "other uses", including but not limited to flushing of toilets, industrial process water, commercial laundries, car washes, dust control, and flushing of sanitary sewers.

The majority of the uses listed above are not allowed for disinfected, secondary recycled water, which is the type of recycled water currently produced by the Burlingame WWTP. For example, irrigation with disinfected, secondary recycled water is not allowed except in specialized cases such as freeway landscaping, restricted-access golf courses, and non-edible vegetation with access control to prevent the land's use as a park, playground, or school yard. As a result, any

significant expansion of the City's recycled water use will require that the WWTP be upgraded to tertiary treatment processes.

4.0 ESTIMATED RECYCLED WATER DEMANDS

EKI developed a list of the fifty customer accounts with the greatest water use in the City based on the 2008 through 2010 potable water billing records. These water use data indicate that seven of the top ten water users are hotels located within the Project Area. Other major water users within the project area include three food preparation businesses, one laundry business, three restaurants, and one office park. In addition, EKI identified the proposed development project at 350 Beach Road (i.e., the "Millennium" project) as a potential future recycled water customer based on the size of the proposed development and its location within the Project Area.

Restaurants and other businesses related to food preparation are not generally considered to be good target customers for recycled water due to public health concerns. Therefore, the potential recycled water use opportunities within the Project Area appear to include:

- Irrigation of parks and golf courses;
- Landscaping irrigation around office parks and hotels;
- Cooling towers in hotels and office parks;
- Commercial laundries and laundry facilities within hotels; and
- Toilet flushing in new commercial buildings.

The above uses all are generally considered to be appropriate uses of recycled water in California with the exception of the use of recycled water for laundry facilities. Although use of recycled water for laundry facilities is allowed by the CCR, recycled water use at laundries has generally been avoided in the State of California[1], simply due to public perception issues. In addition, although recycled water use in cooling towers is also considered to be an appropriate use of recycled water, property owners often prefer not to modify their cooling systems to accommodate recycled water due to retrofit costs. Therefore, most recycled water use in California is currently for irrigation purposes. However, because recycled water use for non-irrigation purposes is gaining in acceptance and water conservation is becoming more critical for California in general, this recycled water evaluation considers all of the above uses as potentially viable in the future.

Based upon the above evaluation, the list of potential recycled water customers includes the following:

- Twelve hotels (Hotel Marriott, Vagabond Inn, Hampton Inn and Suites, Bay Landing Hotel, Hyatt Regency SF Airport, Holiday Inn Express, Crowne Plaza SFO, Doubletree Hotel, Embassy Suites SF Airport, Red Roof Inn, Hilton Garden Inn, and Hilton SF Airport);
- The Poplar Creek Golf Course;

[1] One notable local exception is reportedly the Sofitel Hotel in Redwood City.

- Three parks (Bayside Park, Coyote Point County Recreation Area, and Robert E. Wooley Park[2]);
- The office park located at 555 Airport Boulevard (i.e., the Virgin America Office Park);
- The proposed Millennium project, located at 350 Beach Road; and
- The commercial laundry located at 855 Malcolm Road (i.e., West Coast Valet).

The locations of these 19 potential recycled water customers are shown on Figure 1.

The metered potable water use for the identified potential recycled water customers is shown in Table 3 for the years 2008 through 2010. As shown in Table 3, most of the potential recycled water customers have more than one meter, with most typically having at least one irrigation meter and at least one indoor or "commercial" meter. The average daily water use and peak monthly water use for each meter is calculated in Table 3.

In order to estimate the potential recycled water use for these properties, historical potable water use was divided into "irrigation" and "non-irrigation" water use. For calculation purposes, it was assumed that 100 percent of the irrigation water demand could be met by recycled water. Because water use for specific indoor uses (e.g., cooling towers and laundries) is not metered by the City, the cooling tower use and laundry use by hotels and office parks was approximated based on typical estimated ratios for California hotels and office parks.[3]

A summary of the potential recycled water use by potential customer is shown in Table 4. Recycled water use rates are shown on an average annual basis, a peak month basis, and a peak hour basis, and are shown for two scenarios: (a) assuming recycled water use for irrigation, cooling tower, and laundry purposes, and (b) assuming recycled water use for irrigation and cooling tower use only (i.e., no recycled water use for laundry). As shown in Table 4, on an average annual basis, the projected potential water use is approximately 182,000 gpd, or approximately 110,000 gpd assuming that recycled water is not used for laundry purposes. On a peak month basis, the project recycled water flow rate is estimated to be approximately 352,000 gpd, or approximately 257,000 gpd assuming that recycled water is not used for laundry purposes.

Based on the Table 4 projections, the top ten potential recycled water customers in the Study Area are:

Assuming Recycled Water Use for Laundry:

1. Millennium Project (approximately 24,000 gpd (average annual))
2. Hyatt Regency SF Airport (24,000 gpd)

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[2] An information request to Chris Rogers of the City of Burlingame was unable to identify any account for Robert E. Wooley Park. It is therefore believed that this park may not have its own water line and that its water usage may be included with the adjacent Embassy Suites' water usage.

[3] EKI attempted to contact the maintenance and engineering departments of the major hotels, but the hotels were generally unresponsive or indicated that they do not monitor or meter the water use of the cooling towers.

3. Embassy Suites SF Airport (21,000 gpd)
4. West Coast Valet (19,600 gpd)
5. Hotel Marriott (18,900 gpd)
6. Hilton SF Airport (11,900 gpd)
7. Coyote Point County Recreation Area (11,200 gpd)
8. Doubletree Hotel (10,800 gpd)
9. Virgin America Office Park (9,200 gpd)
10. Bayside Park (7,400 gpd)

Assuming No Recycled Water Use for Laundry:

1. Millennium Project (approximately 24,000 gpd)
2. Embassy Suites SF Airport (13,800 gpd)
3. Hyatt Regency SF Airport (12,500 gpd)
4. Hotel Marriott (11,500 gpd)
5. Coyote Point County Recreation Area (11,200 gpd)
6. Virgin America Office Park (9,200 gpd)
7. Bayside Park (7,400 gpd)
8. Hilton SF Airport (4,700 gpd)
9. Doubletree Hotel (4,300 gpd)
10. Red Roof Inn (2,600 gpd)

The Poplar Creek Golf Course is not projected by this method to be one of the top ten potential water customers because the City of Burlingame only supplies a small percentage of the property's water use, with the remainder of the property's water supply being provided by the City of San Mateo and local groundwater. Because recycled water demands were projected based on the historical usage of potable water from the City of Burlingame, the projected recycled water demand for the property is significantly less than would be expected from a golf course of the size.

If it was assumed that the Poplar Creek Golf Course ("Golf Course") would use recycled water for all of its irrigation demand, the potential recycled water demand of the property increases to approximately 170,000 gpd (Table 4), thereby becoming the largest potential recycled water customer for the project. However, because the Golf Course does not currently consume a significant amount of water from the City, providing recycled water to the Golf Course would not result in a commensurate reduction in the City's purchases of water from the San Francisco Public Utilities Commission ("SFPUC"). However, it is possible that providing recycled water to the Golf Course could be more feasible if conducted as part of a regional effort to reduce potable water demands.

5.0 RECYCLED WATER SUPPLY EVALUATION

EKI evaluated the suitability of the recycled water for the projected uses from a quantity and quality perspective. From a quantity perspective, the projected recycled water demands of 182,000 gpd (average annual) and 352,000 gpd (peak month) can be easily provided by the

WWTP, which averages approximately 3 mgd during dry weather and 5 mgd during wet weather. The peak hour recycled water demand of 1.4 mgd can be reliably met using diurnal storage as described in Section 6.0.

To evaluate the suitability of recycled water from a quality perspective, EKI projected the values of certain wastewater effluent quality parameters based on (a) monthly reporting data provided by the City or Burlingame, and (b), for parameters where data was not available from the City, the recycled water quality from South Bayside System Authority, which based on similar water source and geographic proximity, is expected to be similar in quality to the Burlingame recycled water. The projected water quality parameters are shown in Table 5.

This projected recycled water quality was compared to the typically desired recycled water quality for the each of the three main projected recycled water uses: irrigation, cooling towers, and laundry.[4] Parameters where the projected values may exceed the desired values are noted in Table 5. General findings for each of the three projected recycled water uses are provided below.

5.1. Irrigation Use

The water quality of the tertiary-treated recycled water is expected to be consistent with most irrigation use. The main constituents of potential concern for irrigation are related to salinity, typically quantified as total dissolved solids ("TDS") or in some cases electrical conductivity ("EC"). The TDS concentration is the sum of the concentrations of various ions, the most significant of which are typically sodium and chloride. As shown in Table 5, the projected salinity content of the recycled water, reflected by the projected TDS, sodium, and chloride concentrations, is near or slightly greater than the typical salinity concentrations that could be expected to result in minor damage to salt-sensitive plants. Based on experience in Redwood City (HortScience, 2009), such damage would likely be minor or non-existent for most typical plants used for landscaping in Burlingame. However, salt-sensitive plants may experience damage manifested as stunting of growth, yellowing of foliage, and or "burning" of the edges or tips of leaves. The implementation of special procedures aimed at monitoring and/or minimizing salinity impacts on plants may be advisable unless the recycled water salinity is reduced through demineralization.

5.2. Cooling Tower Use

The expected water quality of the tertiary-treated recycled water, at least in the absence of pre-treatment by the hotel facilities, may cause various operation and maintenance difficulties associated with typical cooling tower facilities. In Table 5, EKI compared the projected water quality of the recycled water to typical desirable cooling tower source water constituent ranges for typical constituents of concern, including alkalinity, ammonia, bicarbonate, biochemical oxygen demand ("BOD"), hardness, pH, phosphate, and silica. As shown in Table 5, if

[4] Recycled water is also proposed to be used for toilet flushing within new buildings, such as the Millennium Project. There are no significant water quality concerns for toilet flushing other than color.

additional treatment of the recycled water including ammonia removal[5], anti-scalant addition, and phosphate removal were not performed, there would be some potential for biogrowth, corrosion, and scaling in cooling tower. If such treatment is not provided by the WWTP, such pre-treatment processes would need to be added or adjusted at the individual facilities themselves.

One additional water quality constituent of concern for cooling towers is TDS. When water evaporates from a cooling tower, dissolved solids (i.e., salt or TDS) are left behind in the remaining cooling tower water. If the salinity concentration in the cooling tower system is too great, the solids can cause scale and/or corrosion problems. In cooling towers, the TDS concentration is controlled by what is called "blowdown", or bleeding a stream of water from the cooling tower system. To maintain the amount of water in the cooling tower, "make-up" water needs to be added to the cooling tower system to compensate for the water lost as a result of blowdown and evaporation.

A key parameter used to evaluate cooling tower operation is "cycles of concentration." This is the ratio of the TDS concentration in the blowdown water compared to the TDS concentration in the make-up water, or alternatively, the ratio of the make-up water flow to blowdown water flow.

As shown in Table 5, the estimated TDS concentration of the recycled water is 750 mg/L, which is approximately seven to eight times greater than the current source water TDS concentration of approximately 100 mg/L (Burlingame, 2009). If the TDS of the blowdown water is kept constant, the cycles of concentration will be reduced by a factor of seven to eight and the cooling water system will require seven to eight times as much make-up water. Alternatively, if the number of cycles of concentration is kept constant, the blowdown water TDS will increase by a factor of seven to eight, which would be expected to result in scaling and corrosion issues.

It is anticipated that at a TDS concentration of 750 mg/L, the recycled water would not be an attractive source of cooling tower make-up water due to the operational issues that caused by the higher salinity. It is therefore assumed that a desalination process such as reverse osmosis would need to be added to the WWTP in order to reduce the TDS concentration in recycled water to a more manageable concentration of around 300 to 400 mg/L and make the recycled water a practical source of cooling tower make-up water.

5.3. Laundry Use

The expected quality of the tertiary-treated recycled water is expected to be consistent with laundry facility use. In general, the main potential constituents of concern for laundry facilities are hardness, turbidity, color, and pH. The quality of the tertiary-treated recycled water is expected to be within acceptable ranges for the constituents of concern for laundry facilities. With respect to these constituents, the one potential concern would be algae growth in recycled

[5] Ammonia removal could potentially be provided by either modification of the existing activated sludge process at the WWTP, or through the addition of certain desalination processes (e.g., reverse osmosis) that are discussed in this section.

water storage ponds, if any. The conceptual recycled water system includes tanks for storage, so algae growth is not anticipated to be an issue.

As previously noted, the main obstacle to the use of recycled water by laundry facilities is public perception. If the City decides to promote recycled water use by laundry facilities, a public education campaign will likely be needed to convince representatives of such facilities that the quality of the recycled water will meet their needs.

6.0 CONCEPTUAL RECYCLED WATER SYSTEM

The recycled water system needed to serve the potential customers in the Project Area would include the following general components:

- Tertiary Treatment Facilities: As previously discussed, tertiary treatment will be needed for the envisioned recycled water uses. Tertiary treatment typically involves flocculation, filtration, and disinfection of the secondary influent.

- Supplemental Treatment Facilities: Assuming that recycled water is being used for cooling tower make-up water, supplemental treatment facilities are likely to be required including desalination facilities (either reverse osmosis or "RO", or alternatively electrodialysis reversal, or "EDR" equipment). For purposes of this memorandum and the associated cost estimates, it is assumed that the required ammonia removal would be provided by the desalination equipment, or alternatively, through the optimization of the operation of the existing secondary treatment facilities. It is also assumed that the recycled water users will provide some pre-treatment for control constituents such as bicarbonate and phosphate.

- Recycled Water Storage Facilities: Given the relatively large supply of recycled water compared to the recycled water demand, there does not appear to be a significant need for seasonal storage of recycled water at this time. As previously discussed, peak month and peak day demands can easily be met by the current WWTP without any storage.

  Some diurnal storage will be needed to meet peak hour demands, which are likely to occur at night due to the expected irrigation time periods. For conceptual cost estimating purposes, it is assumed that storage for four hours of peak hour demand will be needed, for a total of 227,000 gallons, assuming the recycled water use rate, including laundry use, shown in Table 4. Such storage could be provided by a steel or concrete tank located at the WWTP site.

  In the event that the recycled water system is expanded in the future to serve additional customers not identified in this study, the recycled water storage requirements including potential seasonal storage requirements will need to be reassessed.

- Recycled Water Distribution Facilities: Shown on Figure 2 is a conceptual recycled water distribution pipeline alignment, assuming complete participation by all of the

identified potential recycled water customers. For cost estimating purposes, it is assumed that the entire pipeline will be 12 inches in diameter, which results in a 3 feet-per-second flow velocity at the maximum peak hour flow of 1.4 mgd. More detailed hydraulic modeling and/or calculations should be performed to determine the final pipe design.

For cost estimation purposes, it is assumed that the existing WWTP pumps will not provide sufficient hydraulic head for the recycled water distribution system and that a small pump station will therefore be required.

A planning-level estimate of capital costs for the conceptual recycled water system is provided in Table 6. The cost estimate also includes order-of-magnitude estimates of non-construction related costs, such as permitting, monitoring and reporting, environmental review, and engineering. Not included in the cost estimate are the potential costs of retrofits on the customers' plumbing systems which may be needed to accommodate the recycled water. It is assumed that these costs would be borne by the individual customers rather than by the City.

Planning-level costs are shown for three scenarios: (1) assuming no recycled water use for laundry facilities, (2) assuming recycled water will be used for laundry facilities, and (3) assuming recycled water will be used for laundry facilities and for the entire Poplar Creek Golf Course. As previously discussed, Scenario 3 would likely require that the recycled water project be approached as a regional effort amongst multiple agencies.

For Scenarios 1 and 2, depending on whether recycled water is used for laundry facilities, the total estimated capital cost ranges from $11,000,000 to $12,000,000, which corresponds to an estimated cost of $3,400 to $5,200 per acre-foot of water. Note that this cost does not include operation and maintenance ("O&M") costs for the systems. Evaluation of O&M costs is outside the scope of this Technical Memorandum but should be considered when comparing recycled water costs against other water conservation costs. For Scenario 3, the estimated capital cost increases to $19,000,000, but the unit cost decreases to approximately $2,800 per acre-foot.

7.0 DISCUSSION

Aside from cost, some potential constraints on the feasibility of developing, designing, and constructing a new recycled water system include the following:

- As previously discussed, while irrigation is a well-established and well-accepted use for recycled water, some public education and outreach will likely be necessary to convince potential recycled water customers of the viability of using recycled water for cooling towers and particularly for laundry uses.

- Due to water quality issues, the use of recycled water for cooling towers will require changes and/or additions to the pre-treatment processes used by the potential recycled water customers. Potential recycled water customers may resist such pre-treatment changes as well as the required plumbing retrofits and therefore choose to continue use of

potable water for their cooling towers. As an example, in the City of Redwood City, only one facility to date has hooked their cooling towers up to the local recycled water system.

- Typically, a horizontal separation of ten feet between potable water and recycled water pipelines is required. EKI has not checked the proposed recycled water pipeline alignment to see if a 10-foot separation is feasible. In some cases where a 10-foot separation is not feasible, a 4 to 10 foot separation is allowed if certain additional precautions are made to prevent cross-contamination, such as double containment of the recycled water pipeline.

- Although there appears to be some space on or in the vicinity of the WWTP site for new treatment and storage facilities, a preliminary design of the upgrades would be required to confirm whether the existing space is sufficient. Such preliminary design is outside the scope of this Technical Memorandum.

- The recycled water system will require a new or modified permit from the State Water Resources Control Board. The permit will likely include conditions such as monitoring and reporting, periodic cross-connection testing, and design review and inspection of the plumbing retrofits implemented by the recycled water customers. Such conditions will create a significant administrative burden for the City that should be considered.

- Recycled water projects often face opposition during the California Environmental Quality Act ("CEQA") process from public groups concerned with issues such as the safety of recycled water use in public parks, as well as groups opposed to urban growth. It is therefore important to solicit public input on potential recycled water projects as early in the CEQA process as feasible.

8.0 REFERENCES

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TABLES

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Table 1

Recycled Water Uses Allowed In California, California Code Of Regulations, Title 22, Articles 3 and 5.1 (a)

City of Burlingame, California

	Treatment Level				
	Disinfected Tertiary Recycled Water	Disinfected Secondary-2.2 Recycled Water	Disinfected Secondary-23 Recycled Water	Undisinfected Secondary Recycled Water	Other
IRRIGATION					
• Food crops where recycled water contacts the edible portion of the crop, including all root crops • Parks and playgrounds • School yards • Residential landscaping • Unrestricted access golf courses • Any other irrigation uses not prohibited by other provisions of the California Code of Regulations	Allowed	Not allowed	Not allowed	Not allowed	Coagulation unnecessary provided filter effluent turbidity ≤ 2 NTU, turbidity of influent is continuously measured, influent turbidity > 5 NTU for ≤ 15 min and never > 10 NTU, and that there is capability to automatically activate chemical addition or divert the wastewater if the filter influent turbidity > 5 NTU for > 15 min.
• Food crops where edible portion is produced above ground and not contacted by recycled water	Allowed	Allowed	Not allowed	Not allowed	
• Cemeteries • Freeway landscaping • Restricted access golf courses • Ornamental nursery stock and sod farms where access by general public is not restricted • Pasture for animals producing milk for human consumption • Nonedible vegetation with access control to prevent use as a park, playground, or school yard	Allowed	Allowed	Allowed	Not allowed	
• Orchards with no contact between edible portion and recycled water • Vineyards with no contact between edible portion and recycled water	Allowed	Allowed	Allowed	Allowed	

Table 1

Recycled Water Uses Allowed In California, California Code Of Regulations, Title 22, Articles 3 and 5.1 (a)

City of Burlingame, California

	Treatment Level				
	Disinfected Tertiary Recycled Water	**Disinfected Secondary-2.2 Recycled Water**	**Disinfected Secondary-23 Recycled Water**	**Undisinfected Secondary Recycled Water**	**Other**
IRRIGATION					
• Non food-bearing trees, including Christmas tree farms not irrigated less than 14 days before harvest or allowing access to the public • Fodder and fiber crops and pasture for animals not producing milk for human consumption • Seed crops not eaten by humans • Food crops that undergo commercial pathogen-destroying processing before consumption by humans • Ornamental nursery stock and sod farms not irrigated less than 14 days before harvest, retail sale, or allowing access by the general public	Allowed	Allowed	Allowed	Allowed	
IMPOUNDMENT					
• Non-restricted recreational impoundments	Allowed assuming conventional treatment, or as noted in "Other" column (a) (b)	Not allowed	Not allowed	Not allowed	Disinfected tertiary recycled water without conventional treatment is allowed assuming the following monitoring is performed: Sample and analyze monthly at point following disinfection and prior to entry to use impoundment for Giardia, enteric viruses, and Cryptosporidium during first 12 months of operation and use, then quarterly thereafter, discontinuing after 2 years with department approval.
• Restricted recreational impoundments and publicly accessible fish hatcheries	Allowed	Allowed	Not allowed	Not allowed	
• Landscape impoundments without decorative fountains	Allowed	Allowed	Allowed	Not allowed	

Table 1

Recycled Water Uses Allowed In California, California Code Of Regulations, Title 22, Articles 3 and 5.1 (a)

City of Burlingame, California

	Treatment Level				Other
	Disinfected Tertiary Recycled Water	Disinfected Secondary-2.2 Recycled Water	Disinfected Secondary-23 Recycled Water	Undisinfected Secondary Recycled Water	
COOLING AND AIR CONDITIONING					
• Industrial or commercial cooling or air conditioning involving cooling tower, evaporative condenser, spraying, or any mechanism that that creates a mist	Allowed (c)	Not allowed	Not allowed	Not allowed	
• Industrial or commercial cooling or air conditioning not involving a cooling tower, evaporative condenser, spraying, or other mechanism that creates a mist	Allowed	Allowed	Allowed	Not allowed	
OTHER USES					
• Groundwater recharge	Allowed under special case-by-case permits by RWQCBs (d)				
• Flushing toilets and urinals (e) • Priming drain traps • Industrial process water that may contact workers • Structural firefighting • Decorative fountains • Commercial laundries • Consolidation of backfill around potable water pipelines • Artificial snow making for commercial outdoor use • Commercial car washes, including hand washes if the recycled water is not heated, where the general public is excluded from the washing process.	Allowed	Not allowed	Not allowed	Not allowed	Coagulation unnecessary provided filter effluent turbidity < 2 NTU, turbidity of influent is continuously measured, influent turbidity > 5 NTU for < 15 min and never > 10 NTU, and that there is capability to automatically activate chemical addition or divert the wastewater if the filter influent turbidity > 5 NTU for > 15 min.

Table 1

Recycled Water Uses Allowed In California, California Code Of Regulations, Title 22, Articles 3 and 5.1 (a)

City of Burlingame, California

	Treatment Level				
	Disinfected Tertiary Recycled Water	Disinfected Secondary-2.2 Recycled Water	Disinfected Secondary-23 Recycled Water	Undisinfected Secondary Recycled Water	Other
OTHER USES (continued)					
• Industrial boiler feed • Nonstructural fire fighting • Backfill consolidation around non-potable piping • Soil compaction • Mixing concrete • Dust control on roads and streets • Cleaning roads, sidewalks and outdoor work areas • Industrial process water that will not come into contact with workers	Allowed	Allowed	Allowed	Not allowed	
• Flushing sanitary sewers	Allowed	Allowed	Allowed	Allowed	

Abbreviations:

NTU = Nephelometric turbidity units

RWQCB = Regional Water Quality Control Board

Notes:

(a) "Conventional treatment" is defined as any treatment that utilizes a sedimentation unit process between the coagulation and filtration processes and produces disinfected tertiary recycled water effluent.

(b) Tertiary standards to be met at the point between the disinfection process and the point of entry to the use impoundment

(c) Drift eliminators and/or biocides are required if public or employees can be exposed to mist.

(d) Refer to Groundwater Recharge Guidelines, California Department of Health Services.

(e) Title 22, Article 5 currently prohibits recycled water for internal use in free-standing single-family residences or in any facility producing or processing food products or beverages.

Table 2
Top Customer Accounts by 2010 Water Use
City of Burlingame, California

Rank	Account Number	Account Owner	Address	2010 Average Annual Water Use (gpd)	In Project Area?	Type of Business
1	189499	Hyatt Regency Burlingame	1333 Bayshore Hwy	51,432	Yes	Hotel
2	117936	Hilton San Francisco Airport	600 Airport Blvd	43,513	Yes	Hotel
3	242698	Doubletree Hotel	835 Airport Blvd	29,616	Yes	Hotel
4	327821	LSG Skychefs	868 Cowan Road	28,425	Yes	Food Preparation
5	140122	Marriott Full Ser. #33337C9	1800 Bayshore Hwy	25,510	Yes	Hotel
6	260254	Felcor-Hilton Site #69520	150 Anza Blvd	25,264	Yes	Hotel
7	189481	Hyatt Regency Burlingame	1333 Bayshore Hwy	24,185	Yes	Hotel
8	305499	Flying Food Group	810 Malcolm Road	21,262	Yes	Food Preparation
9	260262	Felcor-Hilton Site #69520	150 Anza Blvd	20,959	Yes	Hotel
10	384762	Paul's Rollins Road LLC	1625 Rollins Road	19,596	No	NA
11	144100	County of San Mateo	2 Coyote Point Drive	19,457	Yes	Park
12	168819	Guittard Chocolate	10 Guittard Road	19,433	Yes	Food Preparation
13	168754	Marriott Full Ser. #33337C9	1800 Bayshore Hwy	17,496	Yes	Hotel
14	366211	Crowne Plaza SF Airport	1177 Airport Blvd	15,026	Yes	Hotel
15	280105	Pacific Valley Investors	1250 Bayshore Hwy	14,905	Yes	Hotel
16	366229	Crowne Plaza SF Airport	1177 Airport Blvd	14,714	Yes	Hotel
17	306063	Glenborough LLC, MS #8	1625-35 Rollins Road	14,556	No	NA
18	142344	Prime Time	1730 Rollins Road	13,631	No	NA
19	242703	Doubletree Hotel	835 Airport Blvd	12,822	Yes	Hotel
20	116134	County of San Mateo	2 Coyote Point Drive	11,688	Yes	Park
21	127736	Royal Racquetball	1718 Rollins Road	11,030	No	NA
22	337655	SHUD Inc.	855 Malcolm Road	10,923	Yes	Laundry
23	171984	Northpark	1050-90 Carolan Ave.	10,719	No	NA
24	174479	Northpark	1050-90 Carolan Ave.	10,152	No	NA
25	115340	Penin. Humane Society	12 Airport Blvd	9,654	Yes	Humane Society
26	189512	Hyatt Regency Burlingame	1333 Bayshore Hwy	9,646	Yes	Hotel
27	147221	Northpark	1050-90 Carolan Ave.	9,471	No	NA
28	116998	Northpark	1050-90 Carolan Ave.	9,418	No	NA
29	270363	S B Restaurant Co.	1600 Bayshore Hwy	9,319	Yes	Restaurant

Table 2
Top Customer Accounts by 2010 Water Use
City of Burlingame, California

Rank	Account Number	Account Owner	Address	2010 Average Annual Water Use (gpd)	In Project Area?	Type of Business
30	109756	Guittard Chocolate	10 Guittard Road	9,084	Yes	Food Preparation
31	106473	Benihana Restaurant	1490 Bayshore Hwy.	9,030	Yes	Restaurant
32	276987	Equity Office Prop Utility BPCC	555 Airport Blvd	8,196	Yes	Office Park
33	156766	Mills-Peninsula Health Services	1720 El Camino Real	7,822	No	NA
34	218951	Mrs Bubbles Coin Laundry	715 California Drive	7,645	No	NA
35	111736	Marriott Full Ser. #33337C9	1800 Bayshore Hwy	7,160	Yes	Hotel
36	257278	Red Roof Inns	777 Airport Blvd.	7,110	Yes	Hotel
37	147661	Gus Panos	1900 Garden Drive.	6,611	No	NA
38	299593	City of Burlingame	600 Block Carolan Ave	6,609	No	NA
39	260327	Felcor-Hilton Site #69520	150 Anza Blvd	6,556	Yes	Hotel
40	172613	Vagabone Inn	1640 Bayshore Hwy	6,536	Yes	Hotel
41	196827	Bayside Park	1101 Airport Blvd	6,510	Yes	Park
42	185186	Washington Park Baseball Diamond	601 Block Carolan Ave	5,757	No	NA
43	119687	Northpark	1050-90 Carolan Ave.	5,725	No	NA
44	102893	Atria Burlingame	250 Myrtle Road	5,382	No	NA
45	310388	Burlingame Healthcare Ctr.	1100 Trousdale Drive	5,306	No	NA
46	310396	Burlingame Healthcare Ctr.	1100 Trousdale Drive	5,228	No	NA
47	368441	Stellar Skyline LLC	3155 Frontera Way	4,897	No	NA
48	118592	El Torito #0152	1590 Bayshore Hwy	4,730	Yes	Restaurant
49	112122	Northpark	1050-90 Carolan Ave.	4,638	No	NA
50	368459	Stellar Skyline LLC	3133 Frontera Way	4,356	No	NA
TOTAL				**668,706**	**30**	

Notes:

(a) Top 50 water customers provided from the City of Burlingame database by Chris Rogers. Note that a single property may have more than one account.

Abbreviations:

gpd = gallons per day

NA = Not Applicable (due to site not being in Project Area)

Table 3
Metered Potable Water Use of Potential Recycled Water Customers (a)
City of Burlingame, California

Map ID	Customer Name	Address	Assessors Parcel Number (b)	Meter ID	Meter Size	Billing Classification	2008 Water Use (gallons)	2009 Water Use (gallons)	2010 Water Use (gallons)	Average Daily Water Use 2009-2010 (gpd)	Peak Monthly Water Use 2009-2010 (gpd) (c)
A	Hotel Marriott	1800 Old Bayshore Highway	024380080	9076	2 in.	Irrigation	813,400	2,673,800	2,613,300	7,243	16,562
				59565701	6 in.	Heavy Commercial	10,440,000	11,314,200	9,311,000	28,254	39,400
				8020	2 in.	Irrigation	3,888,400	1,291,400	1,059,800	3,221	4,727
				59565702	6 in.	Heavy Commercial	7,490,000	8,673,300	6,386,000	20,629	28,067
B	Vagabond Inn	1640 Bayshore Highway	026282200	8198	2 in.	Light Commercial	1,314,700	1,337,500	879,500	3,037	5,207
				8197	2 in.	Light Commercial	2,279,400	2,904,900	2,385,700	7,247	9,715
C	Hampton Inn and Suites	1755 Bayshore Highway	024403450	12089694	3 in.	Heavy Commercial	995,500	1,052,500	1,012,500	2,829	3,692
				56070010	3 in.	Heavy Commercial	1,325,900	979,100	1,000,700	2,712	3,763
				47001079	4 in.	Irrigation	487,900	540,800	211,000	1,030	1,975
D	Bay Landing Hotel	1550 Bayshore Highway	026282240	56070012	3 in.	Heavy Commercial	1,252,000	1,057,200	1,213,000	3,110	4,642
				11190365	3 in.	Heavy Commercial	1,335,000	1,197,000	1,386,000	3,538	5,258
				53961068	2 in.	Irrigation	815,300	743,400	790,000	2,101	3,838
E	Hyatt Regency SF Airport	1333 Bayshore Highway	026112140	59250179	6 in.	Heavy Commercial	12,722,000	10,832,700	8,827,500	26,932	35,090
				59250178	6 in.	Heavy Commercial	16,534,200	17,482,000	18,772,700	49,664	64,740
				58452032	4 in.	Irrigation	3,626,300	4,715,200	3,520,800	11,282	24,572
F	Holiday Inn Express	1250 Old Bayshore Highway	026142080	56096290	2 in.	Heavy Commercial	5,538,300	7,484,300	7,497,800	20,523	28,007
G	Crowne Plaza SFO	1177 Airport Boulevard	026290310	60924973	4 in.	Heavy Commercial	5,137,700	5,816,900	5,484,500	15,481	21,323
				60924972	4 in.	Heavy Commercial	4,315,800	5,630,000	5,370,600	15,069	20,997
H	Poplar Creek Golf Course	1700 Coyote Point Drive	029350020	10239374	4 in.	Coyote Point	0	666,500	705,000	1,879	7,708
				12090042	1 1/2 in.	Coyote Point	0	105,500	107,500	292	1,025
				10384690	2 in.	Coyote Point	0	717,000	923,000	2,247	6,133
I	Doubletree Hotel	835 Airport Boulevard	026343430	02178540	4 in.	Heavy Commercial	10,215,000	10,360,000	10,810,000	29,000	38,833
				02178493	4 in.	Heavy Commercial	6,260,000	5,795,000	4,680,000	14,349	22,417
				8039	2 in.	Irrigation	2,364,000	1,374,400	1,344,500	3,725	7,960

Table 3
Metered Potable Water Use of Potential Recycled Water Customers (a)
City of Burlingame, California

Map ID	Customer Name	Address	Assessors Parcel Number (b)	Meter ID	Meter Size	Billing Classification	2008 Water Use (gallons)	2009 Water Use (gallons)	2010 Water Use (gallons)	Average Daily Water Use 2009-2010 (gpd)	Peak Monthly Water Use 2009-2010 (gpd) (c)
J	Embassy Suites SF Airport	150 Anza Boulevard	026342350	60706505	6 in.	Heavy Commercial	9,916,000	9,537,000	9,221,300	25,696	32,587
				60706504	6 in.	Heavy Commercial	9,252,500	8,205,900	7,649,900	21,720	25,897
				8062	2 in.	Irrigation	609,400	526,900	335,000	1,181	4,097
				35031723	3/4 in.	Heavy Commercial	64,400	73,200	115,600	259	988
				10452667	2 in.	Irrigation	1,866,000	1,460,500	1,799,000	4,465	11,558
				8041	2 in.	Irrigation	2,588,400	3,197,700	2,393,100	7,659	17,785
K	Red Roof Inn	777 Airport Boulevard	026344130	02632287	3 in.	Heavy Commercial	2,559,000	2,565,000	2,595,000	7,068	11,967
				60876332	3 in.	Heavy Commercial	2,554,500	1,575,100	2,429,600	5,486	12,190
				8269	2 in.	Irrigation	1,365,900	981,700	710,200	2,318	4,268
L	Hilton Garden Inn	765 Airport Boulevard	026344120	56070008	3 in.	Heavy Commercial	555,300	102,900	987,700	1,494	3,995
				56070009	3 in.	Heavy Commercial	136,700	27,700	495,400	717	2,043
				11189640	2 in.	Irrigation	837,000	464,000	980,500	1,979	4,675
M	Hilton SF Airport	600 Airport Boulevard	026363490	59208324	6 in.	Heavy Commercial	14,080,600	15,142,900	15,882,300	42,500	55,520
				8001	1 1/2 in.	Irrigation	1,764,100	1,423,000	1,591,300	4,129	9,365
				59208325	6 in.	Heavy Commercial	1,834,700	2,052,000	1,935,900	5,463	9,188
N	Robert E. Wooley Park									-	-
O	Bayside Park	1101/1125 Airport Boulevard	026290380	03245340	3 in.	City Accounts	3,442,000	2,999,000	2,376,000	7,363	18,400
				7998	1 in.	City Accounts	24,700	28,100	25,800	74	158
				12308020	3 in.	City Accounts	180,900	179,500	4,300	252	1,063
				12127961	1 in.	City Accounts	44,400	55,100	48,300	142	238
P	Millennium Project	350 Beach Road	026350130	-	-	-	-	-	-	-	-
Q	Virgin America Office Park	555 Airport Boulevard	026363590	8065	2 in.	Irrigation	2,960,800	2,960,900	2,991,400	8,154	15,493
				8066	1 1/2 in.	Light Commercial	1,106,100	1,046,300	926,200	2,702	3,582
R	Coyote Point County Recreation Area	2 Coyote Point Drive	029321020	58503232	6 in.	Coyote Point	14,485,500	3,920,500	4,266,200	11,215	36,673
				60874905	6 in.	Coyote Point	722,800	8,409,900	7,101,700	21,249	43,718

Table 3
Metered Potable Water Use of Potential Recycled Water Customers (a)
City of Burlingame, California

Map ID	Customer Name	Address	Assessors Parcel Number (b)	Meter ID	Meter Size	Billing Classification	2008 Water Use (gallons)	2009 Water Use (gallons)	2010 Water Use (gallons)	Average Daily Water Use 2009-2010 (gpd)	Peak Monthly Water Use 2009-2010 (gpd) (c)
S	West Coast Valet	855 Malcolm Road	026302460	8148	2 in.	Heavy Commercial	5,708,400	7,935,400	7,955,900	21,769	24,160

Notes:

(a) Except as otherwise noted, data provided from the City of Burlingame financial database.

(b) Assessors Parcel Numbers obtained from San Mateo County website.

(c) Because water usage is billed on a bimonthly basis, the water usage data provided by the City of Burlingame is broken into two-month segments. To obtain "peak month" usage, the highest bimonthly usage during 2009-2010 was divided by two.

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Table 4
Summary of Estimated Recycled Water Use by Potential Recycled Water Customers
City of Burlingame, California

Map ID	Customer Name	Address	# of Hotel Rooms (h)	Irrigation Water Use (gpd)		Non-Irrigation Water Use (gpd) (a)		Estimated Water Use for Cooling Towers (gpd) (b)		Estimated Water Use for Laundry (gpd) (c)		Total Projected Potential Recycled Water Use (gpd)			Total Projected Potential Recycled Water Use Assuming No Laundry Use (gpd)		
				Average	Peak Month	Average	Peak Month	Average	Peak Month	Average	Peak Month	Average	Peak Month	Peak Hour (g)	Average	Peak Month	Peak Hour (g)
A	Hotel Marriott	1800 Old Bayshore Highway	685	10,463	21,288	48,883	67,467	1,045	3,308	7,332	10,120	18,841	34,716	138,866	11,508	24,596	98,386
B	Vagabond Inn	1640 Bayshore Highway	90	0	0	10,284	14,922	137	435	1,543	2,238	1,680	2,673	10,692	137	435	1,739
C	Hampton Inn and Suites	1755 Bayshore Highway	77	1,030	1,975	5,541	7,455	117	372	831	1,118	1,978	3,465	13,860	1,147	2,347	9,387
D	Bay Landing Hotel	1550 Bayshore Highway	130	2,101	3,838	6,648	9,900	198	628	997	1,485	3,296	5,951	23,805	2,299	4,466	17,865
E	Hyatt Regency SF Airport	1333 Bayshore Highway	789	11,282	24,572	76,596	99,830	1,203	3,810	11,489	14,975	23,975	43,356	173,426	12,485	28,382	113,528
F	Holiday Inn Express	1250 Old Bayshore Highway	146	0	0	20,523	28,007	223	705	3,079	4,201	3,301	4,906	19,624	223	705	2,820
G	Crowne Plaza SFO	1177 Airport Boulevard	309	0	0	30,551	42,320	471	1,492	4,583	6,348	5,054	7,840	31,361	471	1,492	5,969
H	Poplar Creek Golf Course (Burlingame-provided water only, see Item H* below)	1700 Coyote Point Drive	-	1,879	7,708	2,538	7,158	0	0	0	0	1,879	7,708	30,833	1,879	7,708	30,833
I	Doubletree Hotel	835 Airport Boulevard	388	3,725	7,960	43,349	61,250	592	1,874	6,502	9,188	10,819	19,021	76,085	4,316	9,834	39,335
J	Embassy Suites SF Airport	150 Anza Boulevard	340	13,304	33,440	47,675	59,472	519	1,642	7,151	8,921	20,974	44,003	176,011	13,823	35,082	140,328
K	Red Roof Inn	777 Airport Boulevard	212	2,318	4,268	12,554	24,157	323	1,024	1,883	3,624	4,524	8,916	35,663	2,641	5,292	21,169
L	Hilton Garden Inn	765 Airport Boulevard	132	1,979	4,675	2,211	6,038	201	637	332	906	2,512	6,218	24,873	2,180	5,312	21,250
ta Cer	Hilton SF Airport	600 Airport Boulevard	402	4,129	9,365	47,963	64,708	613	1,941	7,194	9,706	11,937	21,013	84,051	4,742	11,306	45,226

Table 4

Summary of Estimated Recycled Water Use by Potential Recycled Water Customers

City of Burlingame, California

Map ID	Customer Name	Address	# of Hotel Rooms (h)	Irrigation Water Use (gpd)		Non-Irrigation Water Use (gpd) (a)		Estimated Water Use for Cooling Towers (gpd) (b)		Estimated Water Use for Laundry (gpd) (c)		Total Projected Potential Recycled Water Use (gpd)			Total Projected Potential Recycled Water Use Assuming No Laundry Use (gpd)		
				Average	Peak Month	Average	Peak Month	Average	Peak Month	Average	Peak Month	Average	Peak Month	Peak Hour (g)	Average	Peak Month	Peak Hour (g)
N	Robert E. Wooley Park	150 Anza Boulevard	-	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
O	Bayside Park	1101/1125 Airport Boulevard	-	7,363	18,400	467	1,460	0	0	0	0	7,363	18,400	73,600	7,363	18,400	73,600
P	Millennium Project	350 Beach Road	-	0	0	0	0	0	0	0	0	24,000 (e)	48,000 (e)	192,000 (e)	24,000 (e)	48,000 (e)	192,000 (e)
Q	Virgin America Office Park	555 Airport Boulevard	-	8,154	15,493	2,702	3,582	1,027 (f)	1,361 (f)	0	0	9,181	16,854	67,417	9,181	16,854	67,417
R	Coyote Point County Recreation Area	2 Coyote Point Drive	-	11,215	36,673	21,249	43,718	0	0	0	0	11,215	36,673	146,693	11,215	36,673	146,693
S	West Coast Valet	855 Malcolm Road	-	0	0	21,769	24,160	0	0	19,592	21,744	19,592	21,744	86,976	0	0	0
TOTAL				**78,941**	**189,657**	**401,504**	**565,603**	**6,700**	**19,200**	**72,500**	**94,600**	**182,100**	**351,500**	**1,406,000**	**109,600**	**256,900**	**1,027,500**
H*	Poplar Creek Golf Course (Entire Water Demand) (h)	1700 Coyote Point Drive	-	170,000	510,000	-	-	-	-	-	-	170,000	510,000	2,040,000	170,000	510,000	2,040,000
TOTAL INCLUDING ENTIRE GOLF COURSE DEMAND				**247,062**	**691,948**	**401,504**	**565,603**	**6,700**	**19,200**	**72,500**	**94,600**	**350,221**	**853,792**	**3,415,167**	**277,721**	**759,192**	**3,036,667**

Notes:

(a) Sum of water use from all meters not identified by the City as "irrigation" meters.

(b) Estimated based on a unit rate of 5.6 gpd per occupied room per cooling-degree-day, obtained from (Pacific Institute, 2003). Hotel occupancy rate was assumed to be 70 percent and degree day information based on information from (NCDC, 2011) for the San Francisco Airport (142 cooling degree-days for 1971-2000). For peak month calculations, the degree day information for the month of September was used (38 cooling degree-days).

(c) Estimated based on an assumption that 15 percent of indoor water use in hotels is for laundry. See (Pacific Institute, 2003). For West Coast Valet, it is assumed that 90 percent of their water use is for laundry facilities.

(d) Water use at Robert E. Wooley Park is assumed to be part of the irrigation use at the Embassy Suites hotel, which shares the same address

(e) Estimated based on water demands shown in Tables entitled "350 Beach Road Proposed Water Demands", dated 15 July 2009, by BKF Engineers, provided by the City of Burlingame. The estimate is based on 100% Office Land Use Plan and is equal to the difference between the Scenario C and Scenario B water demands shown in that table. Monthly peaking factor is assumed to be 2.0, using Property "Q" as a guideline. Hourly peak flow is based on the 4.0 peaking factor used in the Tables.

(f) Estimated based on an assumption that 37 percent of indoor water use in office buildings is for cooling towers. See Note (a) for reference.

(g) Except as otherwise noted in Note (d), the hourly peaking factor was assumed to be 4.0 relative to the peak month, average day.

Table 4
Summary of Estimated Recycled Water Use by Potential Recycled Water Customers
City of Burlingame, California

(h) See last paragraph of Section 4.0 for discussion of the Poplar Creek Golf Course recycled water demand. Expected irrigation water use for the entire Poplar Creek Golf Course was estimated as follows:

Estimated acreage = 100 acres
Reference evapotransporation rate (ETo) = 49.54 inches/year average annual for Woodside, California (CIMIS, 2011)
Crop factor for golf course turf grasses (Kc) = approximately 0.8 based on (Brown, 2001).
Crop evapotranspiration rate (ET) = ETo x Kc = 49.54 x 0.8 = 39.6 inches/year
Average Rainfall for San Francisco Airport = 20.11 inches (from National Climactic Data Center website, San Francisco Airport, 1971-2000)
Total theoretical water demand = Area x (ET-rainfall) = (100 acres) x (39.6-20.11 inches/year) x (1 feet/12 inches) = 162 acre-feet per year
Total water demand (including water losses) = (1.1) x (162 acre-feet) x (1 mgd/1,120 acre-feet per year) = 0.16 mgd = 160,000 gpd (average annual)
For peak month, ETo = 6.47 inches/month (July), so ET = 6.47 x 0.8 = 5.2 inches/month
Rainfall for July = 0.03 inches, so Theoretical water demand = (100 acres) x (5.2-0.03 inches/month) x (1 feet/12 inches) = 43 acre-feet per month
Total water demand = 1.1 x (43 acre-feet per month) x (12 months/year) x (1 mgd/1,120 acre feet per year) = 0.51 mgd = 510,000 gpd

References:

(Brown, 2001): "Penman Monteith Crop Coefficients for Use with Desert Turf Systems" in *Crop Science*, 41:1197-1206, Brown, P.W. et al., 2001.
(CIMIS, 2011): California Irrigation Management Information System website, http://www.cimis.water.ca.gov
(NCDC, 2011): National Climatic Data Center website, http://cdo.ncdc.noaa.gov
(Pacific Institute, 2003): *Waste Not, Want Not, The Potential for Urban Water Conservation in California*, November 2003.

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Table 5

Summary of Current Wastewater Effluent Quality and Potential Recycled Water Quality Requirements

City of Burlingame, California

Constituent	Assumed Current Value	Basis for Assumed Value	Desired Value	Basis for Desired Value	Potential Implications for Recycled Water Use in Burlingame
Alkalinity	205 mg/L	SBSA recycled water quality (a)	<350 mg/L	To avoid scaling corrosion in cooling tower systems (f)	None
Ammonia	22 mg/L as N	2010 Monthly Reports - Burlingame (b)	<1 mg/L as N	To avoid biogrowth and corrosion in cooling tower systems (f)	Some potential for biogrowth and corrosion in cooling tower system if ammonia removal is not performed
Bicarbonate	250 mg/L	SBSA recycled water quality (a)	<24 mg/L	To avoid scaling in cooling tower systems (f)	Some anti-scalant measures may need to be taken at facilities with cooling towers
BOD	7 mg/L	2010 Monthly Reports - Burlingame (b)	<15 mg/L	To avoid biofouling of cooling tower systems (c)	None
Boron	0.5 mg/L	SBSA recycled water quality (a)	<0.7 mg/L	To avoid damage to irrigated plants (e)	None
Chloride	300 mg/L	SBSA recycled water quality (a)	<300 mg/L	To avoid damage to irrigated plants (d)	Possible minor damage if used to irrigate salt-sensitive plants without desalination
Hardness	202 mg/L	SBSA recycled water quality (a)	<600 mg/L	To avoid scaling in cooling tower systems (c) (f)	None
Nitrate	2.5 mg/L as N	SBSA recycled water quality (a)	-	-	Irrigation users will need to account for presence of nitrate in recycled water when determining appropriate use of fertilizer
pH	6.7 - 7.5	2010 Monthly Reports - Burlingame (b)	6.5-8.4	To avoid damage to irrigated plants, to avoid corrosion in cooling tower systems (f)	None
Phosphate	10.4 mg/L	SBSA recycled water quality (a)	<4 mg/L	To avoid biogrowth in cooling tower systems (c)	Some treatment likely needed due to potential for biogrowth in cooling tower system
Silica	10 mg/L	SBSA recycled water quality (a)	<50 mg/L	To avoid scaling in cooling tower systems (f)	None
Sodium	200 mg/L	SBSA recycled water quality (a)	<200 mg/L	To avoid damage to irrigated plants (d)	Possible minor damage if used to irrigate salt-sensitive plants without desalination
TDS	750 mg/L	SBSA recycled water quality (a)	<500 mg/L	For economical use in cooling tower systems and unrestricted use for irrigation (e) (f)	Desalination needed for practical use in cooling tower. Possible salt damage if used to irrigate salt-sensitve plants without desalination

Table 5

Summary of Current Wastewater Effluent Quality and Potential Recycled Water Quality Requirements

City of Burlingame, California

Constituent	Assumed Current Value	Basis for Assumed Value	Desired Value	Basis for Desired Value	Potential Implications for Recycled Water Use in Burlingame
Total Coliform	Unknown	-	<2.2 MPN/100 mL	To meet tertiary treatment requirements for unrestricted reuse	Tertiary treatment required for unrestricted reuse
TSS	<30 mg/L	Burlingame NPDES Permit, Average Monthly Limit	<10 mg/L	To meet typical requirements in tertiary treatment NPDES Permit for unrestricted reuse	Tertiary treatment required for unrestricted reuse
Turbidity	Unknown	-	<2 NTU	To meet typical requirements in tertiary treatment NPDES Permit for unrestricted reuse	Tertiary treatment required for unrestricted reuse

Notes:

(a) Recycled water from South Bayside System Authority ("SBSA") was assumed to be similar in quality to the Burlingame recycled water due to similar water source and proximity. No data was available from the City of Burlingame for these parameters. SBSA quality data is the average value during 2007-2008 detected at the Distribution Pump Station.

(b) Based on Monthly Self-Monitoring Reports for the City of Burlingame. The value shown is the maximum detected in August, October, and December 2010, rounded upward to be conservative.

(c) Source: Forbes, Paul J., "Optimization of Cooling Water Treatment Formulations for Use in Recycled Waters", from *Water Soluble Polymers*, edited by Amjad Zahid, 1998.

(d) Source: Wu, Lin and Linda Dodge, 2005, "Landscape Plant Salt Tolerance Salt Selection Guide for Recycled Water Irrigation"

(e) Source: Ayers, R.S. and D.W. Westcot, 1985, *Water Quality for Agriculture, FAO Irrigation and Drainage Paper No. 29,* Rome: Food and Agriculture Organization of the United Nations.

(f) Source: California Urban Water Agencies and WateReuse Association of California, *Urban Water Recycling Feasibility Assessment Guidebook,* September 1998.

Abbreviations:

BOD = Biochemical Oxygen Demand
mg/L = milligrams per liter
MPN = Most Probable Number
NTU = Nephelometric Turbidity Units
SBSA = South Bayside Systen Authority
TDS = Total Dissolved Solids
TSS = Total Suspended Solids

Table 6

Preliminary Planning-Level Opinion of Capital Cost for Conceptual Recycled Water System

City of Burlingame, California

Item	Unit	Unit Cost	Scenario 1: No Laundry Use		Scenario 2: With Laundry Use		Scenario 3: With Laundry Use and Use Over Entire Poplar Creek Golf Course	
			Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
Tertiary Treatment Facilities (a)	gpd	$5	260,000	$1,300,000	350,000	$1,750,000	850,000	$4,250,000
Desalination Facilities (b) (c)	gpd	$10	130,000	$1,300,000	175,000	$1,750,000	425,000	$4,250,000
Additional Supplementary Treatment Facilities (Yard Piping) (d)	ls	$50,000	1.00	$50,000	1.00	$50,000	1.00	$50,000
Recycled Water Storage Tank (e)	gallon	$1	171,000	$171,000	234,000	$234,000	569,000	$569,000
Recycled Water Distribution Pipeline (f)	feet	$240	19,000	$4,560,000	20,000	$4,800,000	20,000	$4,800,000
Recycled Water Pump Station (g)	ls	$250,000	1	$250,000	1	$250,000	1	$250,000
Subtotal Construction Cost				**$7,631,000**		**$8,834,000**		**$14,169,000**
Design Cost (h)				$534,170		$618,380		$991,830
Construction Management and Inspection (i)				$534,170		$618,380		$991,830
Administrative (Permitting) and Environmental Compliance (j)				$190,775		$220,850		$354,225
Subtotal Administration Cost				**$1,259,115**		**$1,457,610**		**$2,337,885**
Contingency (k)				$1,333,517		$1,543,742		$2,476,033
Total (l)				**$11,000,000**		**$12,000,000**		**$19,000,000**
Amortized Annual Cost (30 years, 4% discount factor)				$640,000		$690,000		$1,100,000
Estimated Capital Cost Per Acre-Foot of Water (m)				$5,200		$3,400		$2,800

Table 6

Preliminary Planning-Level Opinion of Capital Cost for Conceptual Recycled Water System

City of Burlingame, California

Notes:

(a) Assumes unit cost of $5 per gpd based on experience with similar plants in the Central Valley. Assumed flow based on peak month daily demand shown in Table 4.

(b) Assumes unit cost of $10 per gpd based on cost curves in (Mackey, 2005). Assumes that 50% of tertiary treated flow will be sent to desalination facilities, thereby decreasing the TDS in the recycled water from approximately 750 mg/L to 375 mg/L.

(c) Assumes that required ammonia removal can be performed by the desalination facilities.

(d) Estimate based on professional experience.

(e) Based on professional experience with similar tanks in the San Francisco Bay Area.

(f) Assumes a 12-inch diameter pipe and a unit cost of $20 per inch of diameter per foot of pipeline, based on professional experience with pipelines in the Central Valley.

(g) Estimate based on professional experience.

(h) Design costs are assumed to be 7% of construction costs.

(i) Construction management and inspection costs are assumed to be 7% of construction costs

(j) Administrative and environmental compliance costs are assumed to be 2.5% of construction costs

(k) A 15% contingency on total project costs is used.

(l) Total is rounded up to two significant digits.

(m) Calculation performed using assumed average annual day demand.

Abbreviations:

gpd = gallons per day

ls = lump sum

References

(EPA, 2000) United States Environmental Protection Agency, *Wastewater Technology Fact Sheet: Trickling Filter Nitrification*, September 2000.

(Mackey, 2005) Mackey, et al, *Salinity Removal Cost Curves for Small to Medium Size Water Wells and Wastewater Effluents,* 2005.

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FIGURES

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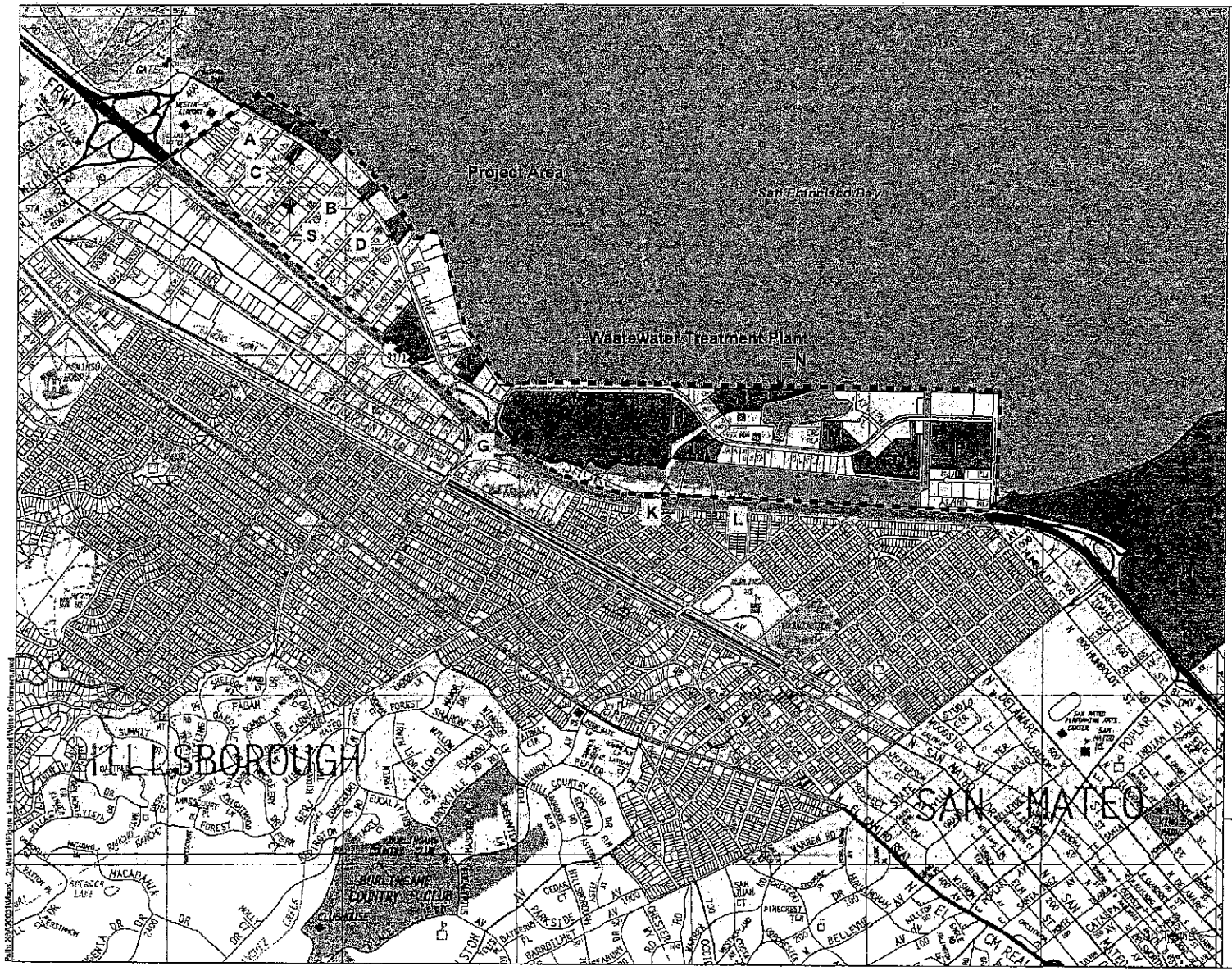

N

0 1,500 3,000

(Approximate Scale in Feet)

Legend

- City of Burlingame
- Unincorporated Area of Burlingame

Potential Recycled Water Use Sites

- A: Hotel Marriott
- B: Vagabond Inn
- C: Hampton Inn and Suites
- D: Bay Landing Hotel
- E: Hyatt Regency
- F: Holiday Inn Express
- G: Crowne Plaza SFO
- H: Poplar Creek Golf Course
- I: Doubletree Hotel
- J: Embassy Suites SF Airport
- K: Red Roof Inn
- L: Hilton Garden Inn
- M: Hilton SF Airport
- N: Robert E. Wooley Park
- O: Bayside Park
- P: Millennium Project
- Q: Virgin America Office Park
- R: Coyote Point County Recreation Area
- S: West Coast Valet

Notes

1. All locations are approximate.
2. Unincorporated areas of Burlingame are served with potable water by the City of Burlingame.
3. City basemap obtained from City of Burlingame Geographical Information System.

Source

Thomas Brothers Maps, 2003

Erler & Kalinowski, Inc.

Potential Recycled Water Customers

City of Burlingame
Burlingame, CA
March 2011
EKI A20031.21
Figure 1

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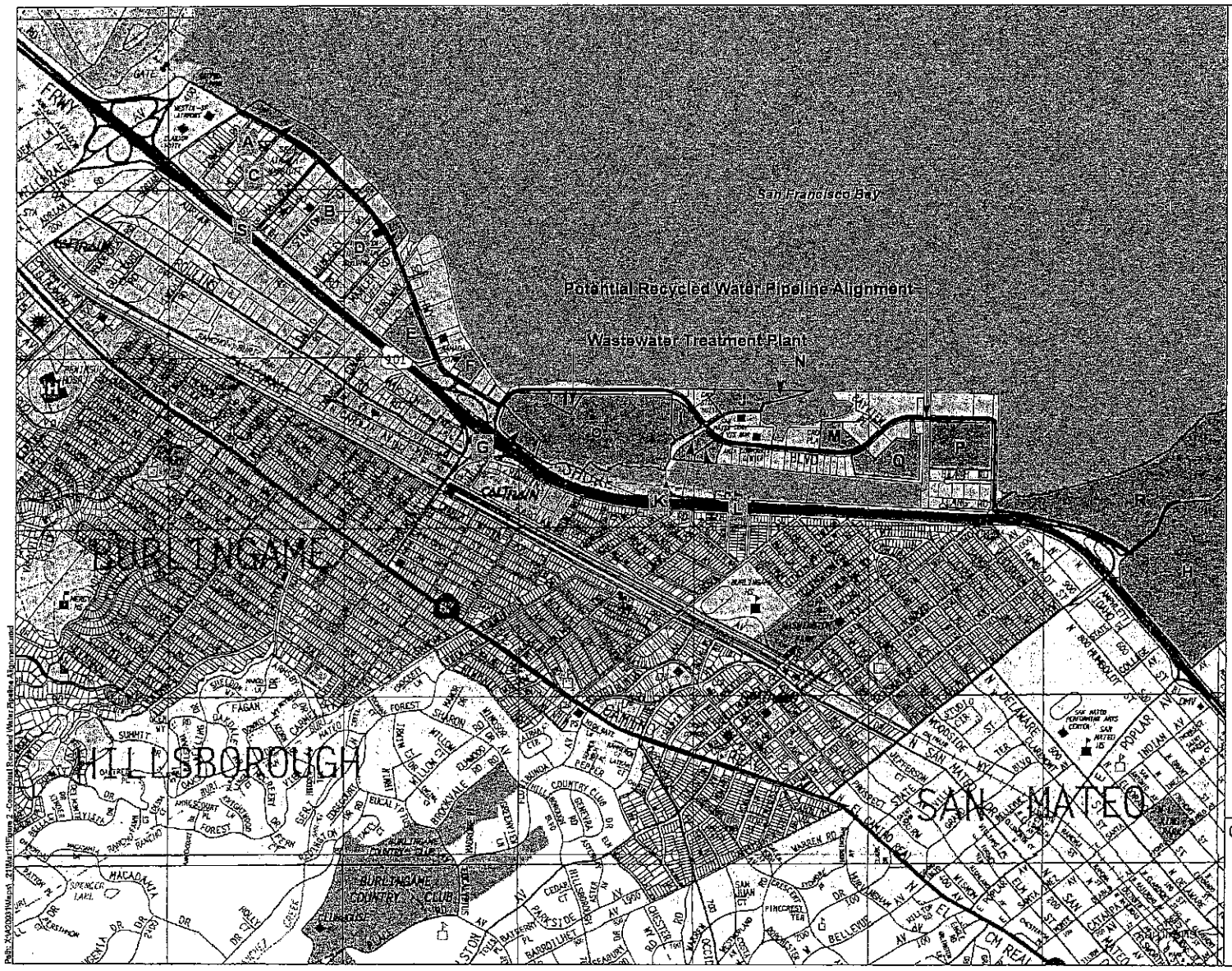

N

0 1,500 3,000

(Approximate Scale in Feet)

Legend

Potential Recycled Water Pipeline Alignment

Potential Recycled Water Use Sites

- A: Hotel Marriott
- B: Vagabond Inn
- C: Hampton Inn and Suites
- D: Bay Landing Hotel
- E: Hyatt Regency
- F: Holiday Inn Express
- G: Crowne Plaza SFO
- H: Poplar Creek Golf Course
- I: Doubletree Hotel
- J: Embassy Suites SF Airport
- K: Red Roof Inn
- L: Hilton Garden Inn
- M: Hilton SF Airport
- N: Robert E. Wooley Park
- O: Bayside Park
- P: Millennium Project
- Q: Virgin America Office Park
- R: Coyote Point County Recreation Area
- S: West Coast Valet

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1. All locations are approximate.
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3. City basemap obtained from City of Burlingame Geographical Information System.

Source

Thomas Brothers Maps, 2003

Erler & Kalinowski, Inc.

Conceptual Recycled Water Pipeline Alignment

City of Burlingame
Burlingame, CA
March 2011
EKI A20031.21

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Figure 2

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Superior Court of California, County of San Mateo
Hall of Justice and Records
400 County Center
Redwood City, CA 94063-1655

JOHN C. FITTON
COURT EXECUTIVE OFFICER
CLERK & JURY COMMISSIONER

(650) 599-1210
FAX (650) 363-4698
www.sanmateocourt.org

March 6, 2013

City Council
City of Burlingame
501 Primrose Road
Burlingame, CA 94010

Re: Grand Jury Report: "Water Recycling – An Important Component of Wise Water Management"

Dear Councilmembers:

The 2012-2013 Grand Jury filed a report on March 6, 2013 which contains findings and recommendations pertaining to your agency. Your agency must submit comments, within 90 days, to the Hon. Richard C. Livermore. Your agency's response is due no later than June 4, 2013. **Please note that the response should indicate that it was approved by your governing body at a public meeting.**

For all findings, your responding agency shall indicate one of the following:

1. The respondent agrees with the finding.

2. The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefore.

Additionally, as to each Grand Jury recommendation, your responding agency shall report one of the following actions:

1. The recommendation has been implemented, with a summary regarding the implemented action.

2. The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.

3. The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or director of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the Grand Jury report.

4. The recommendation will not be implemented because it is not warranted or reasonable, with an explanation therefore.

Please submit your responses in all of the following ways:

1. Responses to be placed on file with the Clerk of the Court by the Court Executive Office.

   - Prepare original on your agency's letterhead, indicate the date of the public meeting that your governing body approved the response address and mail to Judge Livermore.

     Hon. Richard C. Livermore
     Judge of the Superior Court
     c/o Charlene Kresevich
     Hall of Justice
     400 County Center; 2nd Floor
     Redwood City, CA 94063-1655.

2. Responses to be placed at the Grand Jury website.

   - Copy response and send by e-mail to: grandjury@sanmateocourt.org. (Insert agency name if it is not indicated at the top of your response.)

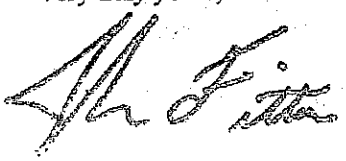
3. Responses to be placed with the clerk of your agency.

   - File a copy of the response directly with the clerk of your agency. Do not send this copy to the Court.

For up to 45 days after the end of the term, the foreperson and the foreperson's designees are available to clarify the recommendations of the report. To reach the foreperson, please call the Grand Jury Clerk at (650) 599-1210.

If you have any questions regarding these procedures, please do not hesitate to contact Paul Okada, Chief Deputy County Counsel, at (650) 363-4761.

Very truly yours,



John C. Fitton
Court Executive Officer

JCF:ck
Enclosure

cc: Hon. Richard C. Livermore
Paul Okada

Information Copy: City Manager

WATER RECYCLING – AN IMPORTANT COMPONENT OF WISE WATER MANAGEMENT

SUMMARY

San Mateo County's more than 720,000 residents are almost completely dependent on the Hetch Hetchy regional water system, a system vulnerable to drought and changing weather patterns. Facing an expanding population and a limited water supply, San Mateo County (County)[1] and its 20 cities and towns (Cities) must reduce their residents' dependence on imported water by diversifying their water supply sources. One way to diversify is through the increased use of recycled water.

Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

Water recycling reduces regional dependence on imported water by providing a local, drought-resistant water source. It enhances water quality by reducing discharges to and diversions from ecologically sensitive water bodies. It is environmentally sustainable and has a smaller energy footprint than most other water supply sources.

The 2012-2013 San Mateo County Civil Grand Jury (Grand Jury) investigated recycled water use and found that only the cities of Daly City and Redwood City have implemented water recycling programs. The cities of Brisbane, Foster City, Pacifica, San Bruno, South San Francisco, and San Mateo have water recycling programs under consideration. The cities of Atherton, Belmont, Burlingame, Colma, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Portola Valley, San Carlos, and Woodside, plus the County, do not currently plan to develop water recycling programs. East Palo Alto did not respond to the Grand Jury's survey.

The Grand Jury recommends that Daly City and Redwood City study expansion of their programs into other non-potable uses of recycled water, as well as geographic expansion of their distribution system. The Grand Jury recommends the cities of Brisbane, Foster City, Pacifica, San Bruno, South San Francisco, and San Mateo finalize their feasibility studies and develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns. The Grand Jury recommends the remaining Cities and the County engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing programs for recycling water.

BACKGROUND

Population growth and climate change put at risk the reliability and sustainability of the water supply that many of us take for granted. Our region's imported water supplies, while still capable

[1] The term "County" in this report refers to the government of the County or the geographic area of the County, as appropriate to the context in which it is used.

of meeting demands during years of normal rainfall, are increasingly less reliable when rainfall is below normal. This problem will continue to worsen as more people and businesses move into the region thereby increasing the demand for water. The *San Francisco Bay Area Integrated Regional Water Management Plan*[2] highlights the growing imbalance between water supply and demand and provides a blueprint for improving the region's water supply reliability. The plan emphasizes a multi-faceted approach to addressing regional water problems and sets forth a core strategy of increasing the amount of water recycling in the region.

On February 3, 2009, the California State Water Resources Control Board (State Water Board) adopted a policy encouraging the use of recycled water. The State Water Board found that recycled water, when used in compliance with the policy, Title 22, Division 4, Chapter 3 of the California Code of Regulations (CCR), and all applicable state and federal water quality laws, is safe, and strongly supports its use.[3]

With regional and state support for recycled water, the Grand Jury sought to determine what efforts the County and Cities were undertaking to promote and develop programs for recycling water.

METHODOLOGY

The Grand Jury collected information about water recycling programs in the County via a survey sent to the County Public Works director and each of the Cities' managers. The Grand Jury conducted online research and interviewed representatives from Redwood City, the Bay Area Water Supply and Conservation Agency (BAWSCA), and the South Bayside System Authority. The Grand Jury also toured the South Bayside System Authority treatment facility, the Redwood City recycled water pump station, and a site in Redwood City using recycled water for irrigation.

DISCUSSION

The Need for Recycled Water

According to the City/County Association of Governments (CCAG) Energy Strategy 2012 document,[4] the County and Cities' water supply systems may not be able to meet the challenges of population growth and climate change. The San Francisco Public Utilities Commission, operator of the Hetch Hetchy Aqueduct, estimates that the County and Cities will need an additional 5 million gallons of water per day by 2018 to meet projected demands. In order to meet this demand, the County and Cities will need to implement cost-effective and feasible water conservation and recycling programs.

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[2] "San Francisco Bay Area Integrated Regional Water Management Plan," http://bairwmp.org/plan/executive-summary (Dec. 19, 2012).

[3] California Recycled Water Policy, http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/ (Dec. 19, 2012).

[4] "San Mateo County Energy Strategy 2012," http://www.ccag.ca.gov/pdf/USTF/reports/Draft%20County%20Energy%20Strategy.pdf (Dec. 19, 2012).

The County and Cities must diversify their water supply sources and reduce their residents' dependence on water from the Hetch Hetchy regional water system. Recycled water is one of the keys to reducing potable water use. Recycled water can augment water supplies, reduce the impacts and costs of wastewater disposal, and restore and improve sensitive natural environments. Water recycling would help the County and Cities realize the water conservation goals established in the California "20x2020 Water Conservation Plan," that requires urban water suppliers to reduce potable water use 20% by the year 2020.[5]

What is Recycled Water?

Recycled water is wastewater (sewage) treated to remove solids and certain other impurities, such as metals and ammonia, so the water can be used in landscape irrigation and industrial processes, or to recharge groundwater aquifers. The term "recycled water" is synonymous with "reclaimed water" or "reused water."

The Recycling Process

Sanitary sewer systems in the County (Appendix A) deliver wastewater to treatment plants where it progresses through varying degrees of treatment. The end use will dictate whether the wastewater receives primary, secondary, or tertiary treatment and disinfection. (Appendix B)

A dual piping network that keeps recycled water pipes completely separate from drinking water pipes distributes the recycled water to various end users.[6] Effective June 1, 1993, all pipes designed to carry recycled water must be purple, or wrapped in distinctive purple tape and labeled as recycled water.[7]

Historical Use of Recycled Water

Water recycling has been a part of California's water management plan for more than 100 years.

In the early 1900s, partially treated wastewater and groundwater transformed San Francisco's Golden Gate Park from an area of sand and waste to a garden spot. In the 1930s, construction began on the McQueen Treatment Plant in Golden Gate Park to provide secondary-treated recycled water for park irrigation. This practice continued until 1978 when the McQueen plant stopped operating because it did not meet the new state standards for irrigation use.[8]

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[5] California State Water Resources Control Board - 20x2020 Agency Team on Water Conservation, http://www.swrcb.ca.gov/water_issues/hot_topics/20x2020/index.shtml (Dec. 19, 2012).

[6] Wikipedia - Reclaimed Water, http://en.wikipedia.org/wiki/Reclaimed_water (Dec. 19, 2012).

[7] "California Health Laws Related to Recycled Water", http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Recharge/Purplebookupdate6-01.PDF (Dec. 19, 2012).

[8] San Francisco Water - Recycled Water, http://www.sfwater.org/index.aspx?page=141 (Dec. 19, 2012).

In 1929, Los Angeles County began using recycled water for landscape irrigation in parks and golf courses.[9]

In 1967, the Irvine Ranch Water District (IRWD) began recycling water at its Michelson Water Reclamation Plant. In 1991, IRWD became the first in the nation to obtain health department permits for the interior use of recycled water for flushing toilets and other non-potable uses.[10]

Current Use of Recycled Water

Californians use recycled water for a variety of purposes including irrigation, toilet flushing, construction, water features, dust control, cooling and air conditioning, soil compaction, commercial laundry, car washing, fire sprinkler systems, and sewer and street cleaning. (Appendix C) ***Recycled water must not be used for drinking, bathing, or swimming pools!***

In addition to commercial customers, residential customers are increasingly using recycled water. In southern California, virtually all new residential development serviced by the IRWD are required to use recycled water for landscape irrigation. In northern California, Vintage Greens in Windsor is equipped with dual piping that enables homeowners to use recycled water outside and potable water indoors.[11]

At sites using recycled water for irrigation, signs are displayed warning people not to drink from the irrigation system.

Some local governments, such as Los Angeles and Orange County, are using recycled water for indirect, potable groundwater supply augmentation. The recycled water is pumped into groundwater aquifers, is pumped out, treated again, and then finally used as drinking water. The term for this process is "groundwater recharging."[12]

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[9] http://en.wikipedia.org/wiki/Reclaimed_water

[10] Ibid.

[11] "Recycled Water: Safe, Successful Use in Hundreds of Cities in California and Throughout America," A Summary Report prepared by the Redwood City Public Works Department, http://www.datainstincts.com/images/pdf/cacities.pdf (Dec. 19, 2012).

[12] http://en.wikipedia.org/wiki/Reclaimed_water

Benefits of Recycled Water

Water recycling reduces regional dependence on imported water by providing a local, drought-resistant water source. It enhances water quality by reducing discharges to and diversions from ecologically sensitive water bodies. It is environmentally sustainable and has a smaller energy footprint than most other water supply sources. Recycled water requires about one-eighth the energy required for seawater desalination, less than one-half the energy used by the San Francisco regional water system to bring water to the Bay Area, and one-half to three-quarters the energy required to pump groundwater.[13]

The Importance of Educating the Public about Recycled Water

The public is more likely to support the use of recycled water when it understands its role in water management objectives. Education must focus on the environmental and economic benefits of recycled water, while addressing public health risk concerns.

Redwood City has a comprehensive program for educating the public about recycled water. The City uses printed materials and engages in public outreach activities in order to increase the public's understanding and acceptance of recycled water. Redwood City also requires that all recycled water site supervisors attend a Site Supervisor Certification Workshop.

Safety Concerns about Recycled Water

When used properly and for its intended use, recycled water is safe. A 2005 study titled, "Irrigation of Parks, Playgrounds, and Schoolyards with Reclaimed Water," found that there had been no incidences of illness or disease from either microbial pathogens or chemicals, and the risks of using recycled water for irrigation were not measurably different from irrigation using potable water. Studies by the National Academies of Science and the Monterey Regional Water Pollution Control Agency, have found recycled water to be safe for agricultural use.[14]

State law regulates the production and use of recycled water. Title 22, Division 4, Chapter 3 of the CCR establishes water quality and public health requirements for recycled water. The California Department of Public Health is responsible for establishing these requirements and regional water quality control boards are responsible for their enforcement. In addition, Title 17, Division 1, Chapter 5 of the CCR establishes requirements to prevent cross connections between recycled water systems and drinking water systems. State and local health departments enforce these regulations.[15]

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[13] "Importance of Recycled Water to the San Francisco Bay Area" - Bay Area Recycled Water Coalition http://www.barwc.org/files/LinkClick.pdf (Dec. 19, 2012).

[14] http://en.wikipedia.org/wiki/Reclaimed_water

[15] California Department of Public Health Regulations Related to Recycled Water - January 2009, http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/RWregulations-01-2009.pdf (Dec. 19, 2012).

Cost Concerns about Recycled Water

Most recycled water projects are cost competitive with other water management options when the full range of benefits is considered. For example, the State Recycled Water Task Force, which convened in 2001, estimated that the cost of a recycled water program averaged about $1,025 per acre-foot (325,853 gallons). The Task Force noted this cost was comparable to costs of other water supply options, including new dams, reservoirs, and desalination. The Task Force's average unit cost estimate is very close to the average unit cost of 26 Bay Area recycled water projects evaluated in 2005. Collectively, the Bay Area projects had an average unit cost between $1,000 and $1,200 per acre-foot.[16]

People often use unequal comparisons when evaluating the relative cost of recycled water. For example, the cost of recycled water at the customer's *location* gets compared to the cost of other water supplies at their *source*, without taking into account the transmission, treatment, and distribution costs associated with moving water from its source to the customer's location. Cost comparisons with other supply options commonly ignore differences in delivery reliability and do not account for the cost of wastewater disposal and environmental impact.[17]

Federal, state, and local funding is available to help offset the cost of designing, constructing, and operating water recycling systems. Federal funding is available through the U.S. Bureau of Reclamation under Title XVI of the 1992 Reclamation Wastewater and Groundwater Study & Facilities Act (PL 102-575).[18] State grants are available from a variety of sources including the State Water Board and the California Department of Water Resources.[19] Local funding can include municipal debt repaid through utility rate increases, impact fees, or special assessments.

Cost of Recycled Water to the End User

To encourage the use of recycled water, end users often receive a discount on their water utility bills.[20] Redwood City, for example, uses the following recycled water pricing policy:

- **For existing irrigation meters/accounts that connect to recycled water:** Twenty five percent discount on monthly water utility bills beginning with the first billing period following connection to the Recycled Water Project. Discount shall apply to prevailing drinking water rates and charges in effect at the time of physical connection. The City will perform and pay for customer site retrofits related to landscape irrigation.

- **For existing industrial meters/accounts that connect to recycled water:** Forty percent discount on monthly water utility bills beginning with the first billing period following

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[16] http://www.barwc.org/files/LinkClick.pdf

[17] Ibid.

[18] US Department of the Interior/Bureau of Reclamation – Title XVI (Water Reclamation and Reuse) Program, http://www.usbr.gov/lc/socal/titlexvi.html (Dec. 19, 2012).

[19] California State Water Resources Control Board – Water Recycling Funding Program, http://www.waterboards.ca.gov/water_issues/programs/grants_loans/water_recycling/ (Dec. 19, 2012).

[20] http://en.wikipedia.org/wiki/Reclaimed_water

connection to the Recycled Water Project. Discount shall apply to prevailing drinking water rates and charges in effect at the time of physical connection. Customers will pay for and perform all facilities retrofits for industrial uses.

The North San Mateo County Sanitation District, a subsidiary district of the City of Daly City, also charges its customers using recycled water less than it charges customers using potable water.

The Need for Regional Collaboration

The growing imbalance between water supply and demand is a statewide problem, not just a problem in the County. Nevertheless, local water recycling projects are necessary to develop the infrastructure and public acceptance for a regional program.

While there is tremendous opportunity for recycled water in the County, there are numerous regional challenges that need to be addressed in order for local governments to realize the potential benefits of recycled water. These challenges include securing federal and state participation in regional projects, coordinating local water plans and projects for regional benefits, resolving jurisdictional constraints, improving public understanding of recycled water, and addressing health risk misconceptions.[21]

BAWSCA is one agency that helps to coordinate local water plans and projects. BAWSCA represents the interests of 24 cities and water districts and 2 private utilities in Alameda, Santa Clara, and San Mateo counties that purchase water wholesale from the San Francisco regional water system.[22] BAWSCA has initiated work on a long-term reliable water supply plan. This plan will quantify the projected water supply needs of its member agencies through year 2035 and identify water supply management projects that meet those needs. BAWSCA has also been helpful in coordinating the inclusion of local water recycling projects in regional packages submitted for state grant funding.

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[21] http://www.barwc.org/files/LinkClick.pdf

[22] Bay Area Water Supply and Conservation Agency, http://bawsca.org/about/ (Dec. 19, 2012).

Summary of Recycled Water Survey Responses

Existing Recycled Water Programs	
Daly City/ North San Mateo County Sanitation District	The North San Mateo County Sanitation District, a subsidiary district of Daly City, began delivering recycled water to commercial customers in August 2004. The distribution system consists of 4.85 miles of distribution pipeline, 2 pump stations, and 1.4 million gallons of storage. The geographic area served is Northern San Mateo County and the Southwest portion of the City/County of San Francisco through contractual agreements with its golf clubs. This represents 4.2% of the Sanitation District's geographic area. At maximum production, 41% of the Sanitation District's sewage effluent becomes recycled water. Median landscape and playing field irrigation, sewer main flushing, and turf irrigation at the Olympic, San Francisco, Lake Merced, and Harding Park Golf Clubs are the primary uses for the recycled water. Actual usage billed in hundred cubic feet units (748 gallons) determines the charges for recycled water. There are plans to conduct supplementary tests in the winter/spring 2012-2013 to determine if Colma cemeteries, Park Merced, and San Francisco State University can receive recycled water.
Redwood City	In 2002, Redwood City began planning for the development of a citywide recycled water system to address the very real possibility of severe water shortages in the coming years. The city had been exceeding its Hetch Hetchy water allotment and was searching for a way to use less water. In 2003, the City formed a Community Task Force on Recycled Water to build community support for the project. Initial opposition to the project centered on the safety of children at playgrounds and parks. Physical construction of the recycled water project began in 2005. Phase I of the project became operational in 2010. The distribution system consists of 15+ miles of distribution pipeline, 1 pump station, and 4.36 million gallons of storage. The geographic area served includes Redwood Shores and Seaport. This represents 50% of the geographic area of Redwood City. Currently, Redwood City uses 6% of its sewage effluent as

	recycled water. In 2011, the city saved 169 million gallons of potable water. Redwood City uses recycled water for commercial and residential irrigation, dust control, water features, car washing, and sewer lift station cleaning. Actual usage by metering determines the charges for recycled water. Phase II of the Recycled Water Project calls for expansion into the area west of US 101. In the future, Redwood City can deliver recycled water to adjacent cities.
Recycled Water Projects under Consideration	
Brisbane	Brisbane has a proposed recycled water project under environmental review. The project known as "Brisbane Baylands" is approximately one square mile of underdeveloped brownfield southwest of Candlestick Park on the west side of US 101. Irrigation and toilet flushing within commercial buildings will be the primary uses of the recycled water.
Foster City	Foster City, the Estero Municipal Improvement District, and the City of San Mateo are preparing a Wastewater Treatment Plant Master Plan that will explore the feasibility of producing recycled water. The expected completion date is May 2013.
Pacifica	Pacifica, through a contract with the North Coast County Water District, plans to deliver recycled water for irrigation to Sharp Park Golf Course, Fairway Ballpark, Oceana High School and Ingrid B. Lacy Middle School fields, and the Beach Boulevard Promenade in the Spring of 2013. This represents 10% of its geographic jurisdiction. The recycled water system includes one pump station, three miles of distribution pipeline, and a 400,000-gallon tank. Pacifica anticipates potable water savings of 50 million gallons each year. Recycled water rates will be less than potable water rates.
San Bruno and South San Francisco	San Bruno owns and operates a Water Quality Control plant jointly with South San Francisco. In 2009, a Recycled Water Feasibility Study was completed. A program for recycling water could be operational in the year 2020. The proposed facilities would include approximately four miles of distribution pipe, a 1.4 million gallon per day tertiary treatment system, and two storage tanks. Landscape irrigation at parks and schools in the service area, including the Golden Gate

	National Cemetery and Commodore Park in San Bruno, will be the primary uses for the recycled water.
City of San Mateo	The City of San Mateo is performing a market analysis to identify demand for recycled water. The city plans to serve low-lying areas, encompassing 30-50% of the city's geographic area. Irrigation would be the main use of recycled water.
Cities/Towns Not Planning on Developing Recycled Water Programs	
Atherton	Atherton stated that CalWater handles its water issues.[23] The West Bay Sanitary District collects Atherton's sewage and the South Bayside System Authority treats it.
Belmont	Belmont is not involved in water distribution or wastewater treatment and does not have the infrastructure to undertake such function. The South Bayside System Authority treats its wastewater.
Burlingame	Burlingame uses a small amount of recycled water at the wastewater treatment plant for washing down equipment, but has no plans to develop a program for distributing recycled water.
Colma	Colma does not have a sewer treatment plant, nor is it a water purveyor. Therefore, the revenue source to fund a capital improvement, such as the infrastructure for a recycled water system, becomes very unlikely. Colma would be interested in recycled water for irrigation purposes. The North San Mateo County Sanitation District, a subsidiary district of Daly City, plans to conduct supplementary tests in the winter/spring 2012-2013 to determine if Colma cemeteries can receive recycled water.
Half Moon Bay	The Sewer-Authority Mid-Coastside or the Coastside County Water District is the agency that would implement a program for recycling water. These agencies are responsible for wastewater treatment and water distribution respectively within the city limits of Half Moon Bay.
Hillsborough	Hillsborough does not plan to recycle water. The adjacent cities of Burlingame and San Mateo treat Hillsborough's sewage.

[23] The Grand Jury has limited legal authority to investigate private utility companies such as CalWater.

Menlo Park	Menlo Park did not cite a reason for not developing a program.
Millbrae	Millbrae, from 1988 to 2009, used recycled water for landscaping at the US 101/Millbrae Avenue interchange. The practice stopped in 2009 due to renovations at the city's wastewater treatment plant. The city has one pump station and less than one mile of distribution pipe. The city currently has no plans to expand the distribution system stating that it would be cost prohibitive to do so.
Portola Valley	CalWater provides Portola Valley's water service and the West Bay Sanitary District provides its wastewater service. Neither of these utilities have plans to construct a recycled water system to serve Portola Valley.
San Carlos	San Carlos cited the distance to the treatment facility and overall cost as reasons for not pursuing a recycled water program.
Woodside	Woodside did not cite a reason for not developing a program.
County of San Mateo	Recycled water programs usually exist at large-scale wastewater treatment facilities. The County does not operate any large-scale wastewater treatment facilities.

Survey Non-Responders

East Palo Alto did not respond to the Grand Jury's survey on Recycled Water.

FINDINGS

F1. There is a growing imbalance in the County and the region between water supply and demand.

F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

F4. Properly produced and used, recycled water poses little or no public health risk.

F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

RECOMMENDATIONS

The 2012-2013 San Mateo County Civil Grand Jury recommends that, the ***City Councils of Daly City and Redwood City*** do the following, on or before June 30, 2014:

R1. Study expansion of their programs into other non-potable uses of recycled water.

R2. Study geographic expansion of their recycled water distribution systems.

The Grand Jury recommends that the ***City Councils of Brisbane, Foster City, Pacifica, San Bruno, South San Francisco, and San Mateo*** do the following, on or before June 30, 2014:

R3. Finalize current feasibility studies.

R4. Actively pursue partnerships for producing and distributing recycled water.

R5. Develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns.

The Grand Jury recommends that the ***County Board of Supervisors and the City/Town Councils of Atherton, Belmont, Burlingame, Colma, East Palo Alto, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Portola Valley, San Carlos, and Woodside*** do the following, on or before June 30, 2015:

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

R7. Conduct any studies that may be required to develop a program for recycling water.

REQUEST FOR RESPONSES

Pursuant to Penal code section 933.05, the Grand Jury requests the following to respond to the foregoing Findings and Recommendations referring in each instance to the number thereof:

- County Board of Supervisors
- Each City/Town Council in the County

The governing bodies indicated above should be aware that the comment or response of the governing body must be conducted subject to the notice, agenda, and open meeting requirements of the Brown Act.

Reports issued by the Civil Grand Jury do not identify individuals interviewed. Penal Code Section 929 requires that reports of the Grand Jury not contain the name of any person or facts leading to the identity of any person who provides information to the Civil Grand Jury.

APPENDIX A

Sewage Collection Systems within Each Treatment Plant Service Area in the County

Treatment Plant Operator	Collection System Operator **	Serves Unincorporated Area	County District *
North San Mateo County Sanitation District	City of Daly City Town of Colma Westborough County Water District	X	
City of Pacifica	City of Pacifica		
Sewer Authority Mid-Coast	City of Half Moon Bay Montara Sanitary District Granada Sanitary District	 X X	
City of San Francisco-Southeast Treatment Plant	City of Brisbane Bayshore Sanitary District Guadelupe Valley Municipal Improvement District	 X	
South San Francisco-San Bruno	City of South San Francisco City of San Bruno	X	
Airports Commission, City and County of San Francisco	San Francisco International Airport	X	
City of Millbrae	City of Millbrae		
City of Burlingame	City of Burlingame Burlingame Hills Sewer Maintenance District Town of Hillsborough (part)	X	X
City of San Mateo-Estero Municipal Improvement District	Town of Hillsborough (part) City of San Mateo Crystal Springs County Sanitation District Estero Municipal Improvement District	X	X

Treatment Plant Operator	Collection System Operator **	Serves Unincorporated Area	County District *
South Bayside System Authority	City of Belmont		
	City of San Carlos		
	Harbor Industrial Sewer Maintenance District	X	X
	Scenic Heights County Sanitation District	X	X
	Devonshire County Sanitation District	X	X
	City of Redwood City		
	Edgewood Sewer Maintenance District	X	X
	Emerald Lake Heights Sewer Maintenance District	X	X
	Fair Oaks Sewer Maintenance District	X	X
	Kensington Square Sewer Maintenance District	X	X
	Oak Knoll Sewer Maintenance District	X	X
	West Bay Sanitary District	X	
City of Palo Alto	East Palo Alto Sanitary District		

Source: San Mateo County Planning Division

* The County Public Works Department provides sewer collection services for residents and businesses in the ten sewer maintenance and sanitation districts within the County.

The County does not operate sewage treatment facilities.

** Sewage from all districts flows through the downstream agency's pipes to the wastewater treatment plant. All districts have agreements with the downstream agencies to pay for the use of their pipes and treatment.

APPENDIX B

RECYCLED WATER USES* ALLOWED IN CALIFORNIA

[illegible]

Recycled Water Use	Treatment Level: Disinfected Tertiary Recycled Water	Disinfected Secondary 2.2 Recycled Water	Disinfected Secondary 23 Recycled Water	Undisinfected Secondary Recycled Water
Other Uses				
Groundwater Recharge	ALLOWED under special case-by-case permits by RWQCB[4]			
Flushing toilets and urinals	ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Priming drain traps				
Industrial process water that may contact workers				
Structural fire fighting				
Decorative fountains				
Commercial laundries				
Consolidation of backfill material around potable water pipelines				
Artificial snow making for commercial outdoor use				
Commercial car washes, not heating the water, excluding the general public from the washing process				
Industrial process water that will not come into contact with workers		ALLOWED	ALLOWED	
Industrial boiler feed				
Nonstructural fire fighting				
Backfill consolidation around nonpotable piping				
Soil compaction				
Mixing concrete				
Dust control on roads and streets				
Cleaning roads, sidewalks and outdoor work areas				
Flushing sanitary sewers				ALLOWED

* Refer to the full text of the December 2, 2000 version Title 22: California Water Recycling Criteria. This chart is only an informal summary of the uses allowed in this version. Adapted for use in Site Supervisor Training Workshops by South Bay Water Recycling, San Jose, California. October 29, 2002. Jerry Brown, Workshop Coordinator. The complete and final 12/02/2000 version of the adopted criteria can be downloaded from:

http://dhs.ca.gov/ps/ddwem/publications/regulations/recycleregs_index.htm

2 With "Conventional tertiary treatment". Additional monitoring for two years or more is necessary with direct filtration.

3 Drift eliminators and/or biocides are required if public or employees can be exposed to mist.

4 Refer to Groundwater Recharge Guidelines, available from the California Department of Health Services.

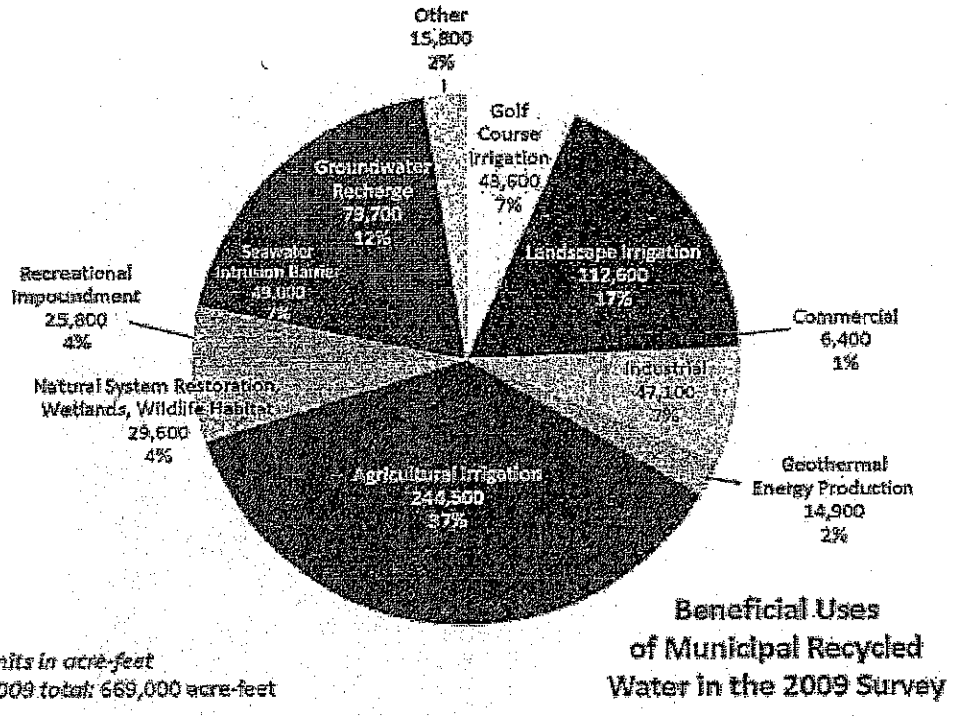
WateReuse Association of California • (916) 442-2746 • www.watereuse.org/h2o

Frequently Asked Questions • 6

APPENDIX C

2009 Municipal Wastewater Survey Results

(Conducted by the State Water Resources Control Board and the Department of Water Resources)



An acre-foot is the amount of water needed to cover one acre to a depth of one foot. It is equivalent to 325,853 gallons

Golf Course Irrigation = Public and private courses

Landscape Irrigation = Non-golf course related landscape irrigation, including buildings, highways, shcools, and parks

Commercial = Business use, such as laundries and office buildings

Industrial = Manufacturing facilities, cooling towers

Geothermal Energy Production = Augmentation of geothermal fields

Agricultural Irrigation = Pasture or crop irrigation

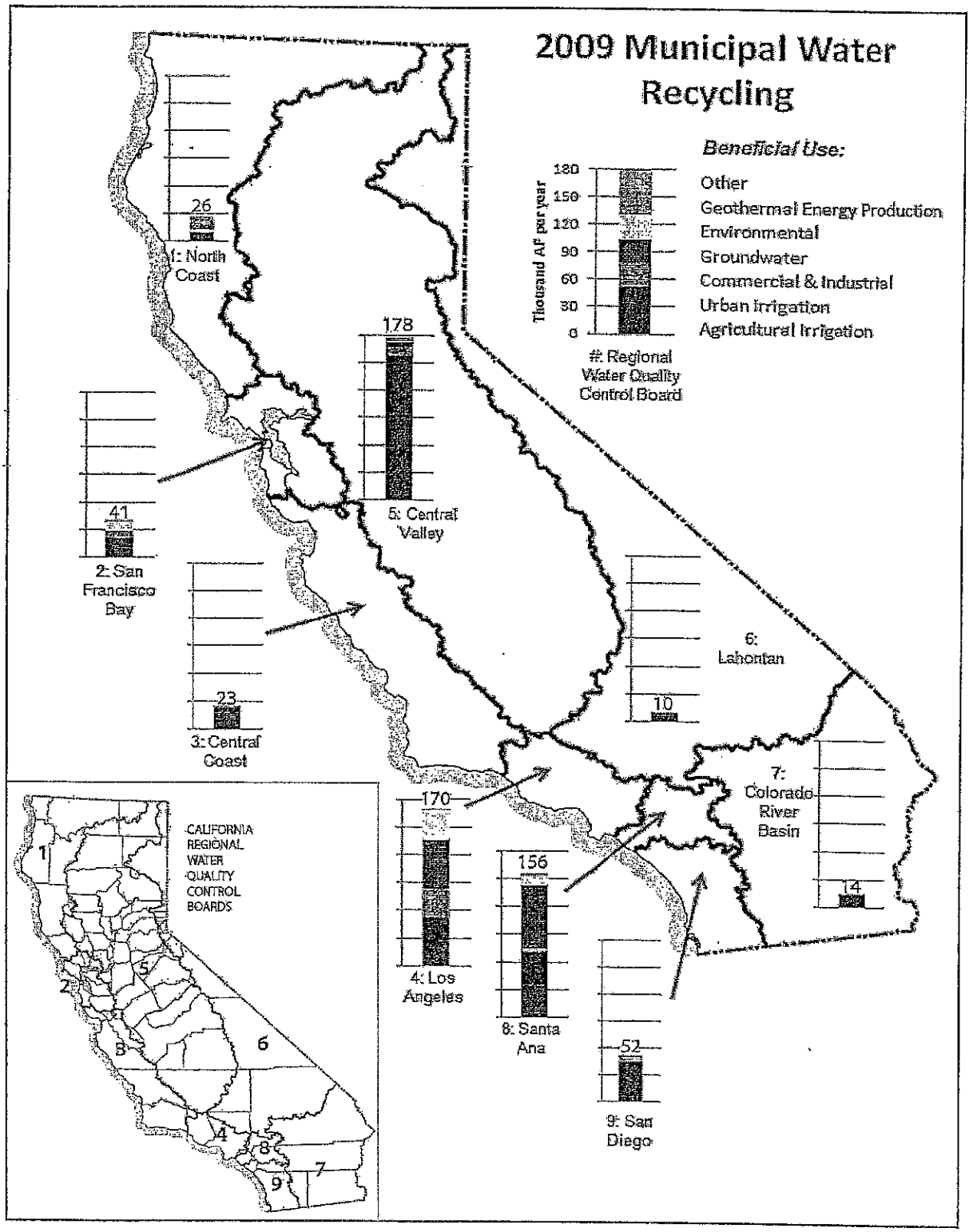
Natural System Restoration, Wetlands, Wildlife Habitat = Addition to wetlands

Recreational Impoundment = Addition to recreational lakes

Seawater Intrustion Barrier = Groundwater injection to prevent or reduce seawater intrusion

Groundwater Recharge = Recharge basins to augment depleted groundwater aquifers

Other = Construction Use, dust control, or unknown



Issued: March 6, 2013

TOWN OF COLMA
1198 El Camino Real • Colma, California • 94014-3212
Tel 650-997-8300 • Fax 650-997-8308

May 9, 2013

Hon. Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center
Redwood City, Ca 94063-1655

Re: Response to Grand Jury Report: "Water Recycling – An Important Component of Wise Water Management"

Dear Judge Livermore,

Thank you for the opportunity to review and comment on the findings of the Grand Jury. This letter serves as the Town of Colma's (Town) response to the recommendations found therein.

Findings:
The Town agrees with the findings as stated on page 11 of the Grand Jury Report.

"Colma does not have a sewer treatment plant, nor is it a water purveyor. Therefore, the revenue source to fund a capital improvement, such as the infrastructure for a recycled water system, becomes very unlikely. Colma would be interested in recycle water for irrigation purposes. The North San Mateo County Sanitation District, a subsidiary of Daly City, plans to conduct supplementary tests in the winter/spring 2012-2013 to determine if Colma cemeteries can receive recycled water."

Recommendations:
The Grand Jury's recommendations that apply to the Town are as follows:

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for developing a program for producing and distributing recycled water.

R7. Conduct any studies that may be required to develop a program for recycling water.

Response to R6 & R7: The Town has not implemented this recommendation. Since the Town only maintains a satellite sanitary sewer collection system the driving forces to implement a recycled water distribution project lie with the Waste Water Treatment Plant operator and the water purveyor that service our community. The North San Mateo County Sanitation District (NSMCSD) has indicated that they have plans to conduct supplementary tests to determine if Colma cemeteries can receive recycled water. The Town will coordinate with NSMCSD as it relates to tests and/or studies to determine the feasibility of expanding the use of recycled water within the Town.

California Water Service (CWS) is the purveyor serving water service to the in the Town. The Town will engage in active dialogue with CWS following the completion of tests and/or studies in conjunction with NSMCSD.

It is the Town's intent to do the above mentioned items on or before June 30, 2015 as recommended in the Grand Jury Report.

The City Council of the Town of Colma approved this response to the Grand Jury at its regularly scheduled public meeting on May 8th, 2013.

Sincerely,

Joanne F. del Rosario

Joanne F. del Rosario
Mayor
Town of Colma

NORTH SAN MATEO COUNTY SANITATION DISTRICT

a subsidiary of the City of Daly City

333 - 90TH STREET, DALY CITY, CALIFORNIA 94015-1895

(650) 991-8127

May 29, 2013

Hon. Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center, 2nd floor
Redwood City, CA 94063-1655

Subject: 2012/2013 San Mateo County Civil Grand Jury Report:
Water Recycling – An Important Component of Wise Water Management

Dear Judge Livermore:

On behalf of the City Council of the City of Daly City, sitting as the Board of Directors of the North San Mateo County Sanitation District, I have been requested to submit for the City the following responses to the Civil Grand Jury findings and recommendations pertaining to the above referenced report:

FINDINGS

F1. There is a growing imbalance in the County and the region between water supply and demand.

Response: The City agrees with the finding.

F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

Response: The City agrees with the finding.

F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

Response: The City agrees with the finding.

F4. Properly produced and used, recycled water poses little or no public health risk.

Response: The City agrees with the finding.

F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

Response: The City agrees with the finding.

F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

Response: The City agrees with the finding.

RECOMMENDATIONS

R1. Study expansion of their (Daly City's) programs into other non-potable uses of recycled water.

Response:

The City has implemented this recommendation. In October 2009, Carollo Engineers of Walnut Creek issued its combined results of the *Recycled Water Treatment and Delivery System Expansion Feasibility Study* to Daly City and the San Francisco Public Utilities Commission (SFPUC). The joint effort study demonstrated it was technically feasible to expand the District's tertiary treatment system by approximately 3.4 million gallons a day at an estimated cost of $60.1 million. By comparison, the District's current recycled water program can produce 2.77 million gallons a day at a capital cost of $7.6 million. The proposed expanded recycled water facilities has been estimated at $2,100 per acre foot, almost double the collective $1,000 to $1,200 acre foot Bay Area recycled water cost cited by the Civil Grand Jury.

The expansion of recycled water by Daly City was made part of the Bay Area Water Supply and Conservation Agency (BAWSCA) report *Long-Term Reliable Water Supply Strategy Phase II A Report.* As part of BAWSCA's continued formal project evaluation, the District has re-engaged Carollo Engineers to address a number of remaining key project questions to include design yield, customer interest, capital and operations cost, anticipated life cycle, project implementation and water quality considerations. Daly City will be submitting these finding to BAWSCA consistent with their July 1, 2013 project deadline.

In addition, a second local project expansion study is being conducted through a memorandum of understanding executed with the SFPUC in September, 2012, to engage Trussell Technologies of Oakland to perform a Filter Loading Rate Evaluation for Water Reuse (FLEWR) study. This effort intends to assess if there is a cost effective manner to increase the amount of tertiary water produced by the existing filtration system consistent with Title 22 public health regulations. Testing under this study began in January and continues with final study results anticipated by July 2014, slightly after the recommended June 30, 2014 Civil Grand Jury deadline.

R2. Study geographic expansion of their recycled water distribution systems.

Response:

The City has implemented this recommendation. The joint effort undertaken by Daly City and the SFPUC that resulted with the Carollo Engineers expansion feasibility study focused on cemeteries in Colma and expanded irrigation use in San Francisco. When assessing average day demands, Colma cemeteries would account for 2.29 million gallons a day, San Francisco irrigation use at Lake Merced Hill, Parkmerced Development and San Francisco State University would account for 0.56 million gallons a day. A peak day demand factor included a 1.3 peaking

factor over average day demands. As noted in Daly City's previous response, Carollo Engineers is addressing a project evaluation as part of the BAWSCA water supply assessment due on July 1, 2013 but is only focusing its effort on deliveries to Colma cemeteries.

R3. Finalize current feasibility studies.

Response: Will not be implemented as it is outside of Daly City's jurisdiction.

R4. Actively pursue partnerships for producing and distributing recycled water.

Response: Will not be implemented as it is outside of Daly City's jurisdiction.

R5. Develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns.

Response: Will not be implemented as it is outside of Daly City's jurisdiction.

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

Response: Will not be implemented as it is outside Daly City's jurisdiction.

R7. Conduct any studies that may be required to develop a program for recycling water.

Response: Will not be implemented as it is outside Daly City's jurisdiction.

The City of Daly City, through its subsidiary the North San Mateo County Sanitation District, appreciates the opportunity to provide responses to the San Mateo County Civil Grand Jury Report on Water Recycling – An Important Component of Wise Water Management. The City Council, sitting as the Board of Directors of the North San Mateo County Sanitation District, approved the responses contained herein on May 28, 2013.

Should you or the Civil Grand Jury require additional information, please contact me directly at (650) 991-8127.

Very truly yours,

Patricia E. Martel
City Manager

CITY OF EAST PALO ALTO

June 5, 2013

Honorable Robert D. Foiles
Judge of the Superior Court
Hall of Justice
400 County Center, 8th Floor
Redwood City, CA 94063-1655

Re: March 6, 2013 San Mateo County Civil Grand Jury Report on Water Recycling

Honorable Judge Foiles:

On June 4, 2013, at its duly noticed regular meeting, the City Council of the City of East Palo Alto considered its formal response to the March 6, 2013 San Mateo County Civil Grand Jury Report entitled "Water Recycling – An Important Component of Wise Water Management." The following represents the City's formal response to that Civil Grand Jury Report.

Findings

F1. There is a growing imbalance in the County and the region between water supply and demand.
Response 1: *East Palo Alto agrees with this Finding.*

F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.
Response 2: *East Palo Alto agrees with this Finding.*

F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.
Response 3: *East Palo Alto agrees with this Finding.*

City of East Palo Alto
2415 University Avenue
East Palo Alto, CA 94303

Telephone Number: (650) 853-3100
Fax Number: (650) 853-3115

F4. Properly produced and used, recycled water poses little or no public health risk.
Response 4: *East Palo Alto agrees with this Finding.*

F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.
Response 5: *East Palo Alto agrees with this Finding.*

F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.
Response 6: *East Palo Alto agrees with this Finding.*

Recommendations

Two Recommendations apply to the City of East Palo Alto.

The Grand Jury recommends that the ***County Board of Supervisors and the City/Town Councils of Atherton, Belmont, Burlingame, Colma, East Palo Alto, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Portola Valley, San Carlos, and Woodside*** do the following, on or before June 30, 2015:

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.
Response R6: *The City of East Palo Alto will implement this recommendation to the extent it can do so. The City owns the water system serving approximately 90% of the properties located within the City of East Palo Alto, and the system is currently operated by American Water Enterprises (AWE) under contract with the City. Wholesale water is purchased from the San Francisco Public Utilities Commission (SFPUC). The rest of the City's water is provided from groundwater through one mutual water company and one cooperative water company. Wastewater treatment in the City is handled by the East Palo Alto Sanitation District and the West Bay Sanitary District which are both independent governmental units and not subsidiary districts of the City. Efforts will be made to have productive discussions prior to June 30, 2015. The City realizes the critical role water plays in the economic development of the community.*

R7. Conduct any studies that may be required to develop a program for recycling water.
Response R7: *This recommendation is unlikely to be implemented in the immediate future because it is not reasonable for the City of East Palo Alto. As the Grand Jury report notes "Recycled water is wastewater (sewage) treated to remove solids and certain other impurities." The City of East Palo Alto does not own or operate any sewage treatment facilities. The East Palo Alto Sanitation District and West Bay Sanitary District, completely separate governmental entities, are responsible for sanitary sewage and should be the entity tasked with conducting any studies required to develop a program for recycled water. Existing treatment facilities are two and five miles respectively from the City limits. The City also lacks significant landscape areas such as golf courses and parkways, to utilize recycled water in a meaningful or cost effective way.*

Should you have any additional questions or require clarification, please do not hesitate to contact me or our City Manager, Magda Gonzalez.

Sincerely,

Ruben Abrica
Mayor

City of Foster City

ESTERO MUNICIPAL IMPROVEMENT DISTRICT

610 FOSTER CITY BOULEVARD
FOSTER CITY, CA 94404-2222

May 6, 2013

Honorable Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center, 2nd Floor
Redwood City, CA 94063-1655

Subject: RESPONSE TO GRAND JURY REPORT "WATER RECYCLING—
AN IMPORTANT COMPONENT OF WISE WATER MANAGEMENT"

Dear Judge Livermore:

The City of Foster City is in receipt of the Grand Jury's Report entitled, "Water Recycling—An Important Component of Wise Water Management." The City is provided water and sewer services by Estero Municipal Improvement District (EMID) so the response to your letter is from the EMID Board. Pursuant to your March 6, 2013 directive to respond, the EMID Board held a public meeting on May 6, 2013 and approved this letter.

The Grand Jury report acknowledges that the City, EMID and the City of San Mateo are preparing a Wastewater Treatment Plant Master Plan that will explore the feasibility of producing recycled water. EMID has entered into a Consultant Agreement for a Recycled Water Market Assessment to determine the feasibility of recycled water use within the EMID service area.

In response to the listed "Findings and Recommendations", EMID is not in a position to verify the research conducted by the Grand Jury; therefore, our responses should not be interpreted as unconditional agreement on the accuracy of the report, but rather specific only to the information contained in the Grand Jury's report and their stated research.

That being said, EMID generally agrees with the content and conclusions of the report. Our specific responses to the Grand Jury's "Findings" and "Recommendations" are as follows:

FINDINGS

F1. There is a growing imbalance in the County and the region between water supply and demand.

F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

F4. Properly produced and used, recycled water poses little or no public health risk.

F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

Based on the research presented in the Grand Jury's Report, EMID generally agrees with all of the findings stated above.

RECOMMENDATIONS

The Grand Jury recommends that the City Council of Foster City do the following on or before June 30, 2014:

R3. Finalize current feasibility studies.

EMID and the City of Foster City agree to work with the City of San Mateo as the Waste Water Treatment Plant Master Plan is finalized. The Master Plan, in part, will determine what improvements are necessary to produce recycled water. Furthermore, EMID has approved a Consultant Agreement for a Recycled Water Market Assessment to determine the feasibility of recycled water use within its service area. The Recycled Water Market Assessment should be completed in September 2014.

R4. Actively pursue partnerships for producing and distributing recycled water.

EMID agrees to pursue all potential partnerships for producing and distributing the recycled water only if it is determined that the use of recycled water is feasible within the District service area.

R5. Develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns.

EMID does not agree to develop education programs regarding the need for recycled water unless it is determined that production and distribution is feasible within the city limits. However, part of the Consultant's scope of work for the Recycled Water Assessment is preparing outreach materials to address potential concerns. The Recycled Water Market Assessment should be completed in September 2014.

EMID is committed to the continued development of a sustainable community and recognizes the importance of improving the Bay Area water supply reliability. Part of the solution may involve the production and distribution of recycled water as it would reduce the demand for potable water. However, we must be sensitive to the feasibility of such a program in conjunction with the financial impact on the District and its residents.

Sincerely,

Pam Frisella

Pam Frisella
President
Estero Municipal Improvement District

MINUTE ORDER

No. 1316

OFFICE OF THE CITY CLERK
FOSTER CITY, CALIFORNIA

Date: May 7, 2013

Attention: EMID Board of Directors
James C. Hardy, District Manager
Brad Underwood, Public Works Director
Honorable Richard C. Livermore, Judge of the Superior Court

City Council/EMID Board of Directors Meeting Date: May 6, 2013

Subject: Response Letter to the Grand Jury Report Entitled "Water Recycling - An Important Component of Wise Water Management"

Motion by Director Okamoto, seconded by Director Perez, and carried unanimously, 5-0-0, IT WAS ORDERED approving the response letter to the Honorable Richard C. Livermore, Judge of the Superior Court, regarding the Grand Jury Report entitled "Water Recycling - An Important Component of Wise Water Management."

Doris Palmer

CITY CLERK/DISTRICT SECRETARY

CITY OF MENLO PARK

City Council

May 22, 2013

The Honorable Richard Livermore
Judge of the Superior Court
Hall of Justice
400 County Center, 2nd Floor
Redwood City, CA 94063-1655

Re: Grand Jury Report – "Water recycling – An Important Component of Wise Water Management"

Dear Judge Livermore:

The Menlo Park City Council received the above referenced San Mateo County Civil Grand Jury Report in March 2013. The report identifies certain findings and recommendations, and requests that the City Council respond in writing to those findings and recommendations no later than June 4, 2013. At its regular meeting on May 21, 2013, the City Council approved the following response.

Regarding the "findings" of the San Mateo County Civil Grand Jury, Council was requested to respond with one of the following:

1. Council agrees with the finding.
2. Council disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed, and shall include an explanation of the reasons therefore.

Regarding the "recommendations" of the San Mateo County Civil Grand Jury, Council was requested to report one of the following actions:

1. The recommendation has been implemented, with a summary regarding the implemented action.

2. The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.

3. The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or director of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the Grand Jury report.

701 Laurel Street - Menlo Park, CA 94025
Phone: (650) 330-6620 - Fax: (650) 328-7935

4. The recommendation will not be implemented because it is not warranted or reasonable, with an explanation therefore.

The City of Menlo Park responds to the San Mateo County Civil Grand Jury's report as follows:

Summary of Recycled Water Survey Responses

Menlo Park – Menlo Park did not cite a reason for not developing a program.

Staff is unsure who the Grand Jury spoke to regarding whether the City was going to develop a recycling program. Recycling water is normally developed by wastewater treatment facilities and the City does not operate a treatment facility. The City of Menlo Park requests the report be changed as follows: The City of Menlo Park has participated in the City of Redwood/SBSA and Palo Alto studies on recycled water and they both concluded that it was not cost effective to bring recycled water to Menlo Park at this time. As the agencies responsible for recycled water engage in studies that would benefit Menlo Park, the City will fully participate in those studies.

FINDINGS

F1. There is a growing imbalance in the County and the region between water supply and demand.

City Response: Regional water supply and demand projections developed by BAWSCA (Bay Area Water Supply and Conservation Agency) indicate that water demand will exceed water supply in the region. With the assumption that these projections are accurate, the City of Menlo Park agrees with this finding.

F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

City Response: Regional water supply and demand projections developed by BAWSCA indicate that water demand will exceed water supply in the region. With the assumption that these projections are accurate, the City of Menlo Park agrees with this finding.

F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

City Response: Regional water supply and demand projections developed by BAWSCA indicate that water demand will exceed water supply in the region. With the assumption that these projections are accurate, the City of Menlo Park agrees with this finding.

F4. Properly produced and used, recycled water poses little or no public health risk.

City Response: If produced and used in accordance with existing regulations (such as Title 22, Division 4, Chapter 3 of the California Code of Regulations ("CCR") and Title 17, Division 1, Chapter 5 of the CCR), the City agrees that recycled water likely poses little or no public health risk; however the City has not conducted a literature review to develop an independent opinion on this topic.

F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

City Response: The necessity of recycled water education programs varies from community to community. Educational programs are more important to communities currently with recycled water programs than those without. The City agrees that regional educational programs may provide a benefit for cities that are developing or planning to develop recycled water programs.

F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

City Response: The City agrees that collaborative arrangements to jointly produce and distribute recycled water may provide cost-benefits associated with economies of scale, however the actual benefit would vary city to city.

RECOMMENDATIONS

Grand Jury Recommendations R1 through R5 are not addressed herein because they pertain to cities and water agencies other than Menlo Park. As Menlo Park is not responsible for the actions of other water agencies, it cannot respond to such recommendations.

The Grand Jury recommends that the ***County Board of Supervisors and the City/Town Councils of Atherton, Belmont, Burlingame, Colma, East Palo Alto, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Portola Valley, San Carlos, and Woodside*** do the following, on or before June 30, 2015:

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

Response: The City agrees to participate in any studies on the use of recycled water or alternative water supply that would benefit the City.

R7. Conduct any studies that may be required to develop a program for recycling water.

Response: The City of Menlo Park adopted an Urban Water Management Plan (UWMP) in 2011. Chapter 4 .7 of the 2011 UWMP analyzed existing and future recycled uses. The conclusion of the study is that although the City has some potential users of recycled water they are located far from recycled water suppliers at this time. As the agencies responsible for recycled water engage in studies that would benefit Menlo Park, the City will fully participate in those studies. Also, the City is required to update the UWMP every five years and will update it in 2014-15.

Sincerely,

Peter Ohtaki
Mayor
City of Menlo Park

City of Half Moon Bay

501 Main Street
Half Moon Bay, CA 94019
650-726-8270

May 7, 2013

Hon. Richard C. Livermore
Judge of the Superior Court
Hall of Justice
400 County Center, 2nd Floor
Redwood City, CA 94063-1655

SUBJECT: Grand Jury Report: "Water Recycling – An important Component of Wise Water Management"

Dear Judge Livermore:

At its regular meeting of May 7, 2013, the City Council of the City of Half Moon Bay approved the following responses to the Grand Jury Report "Water Recycling – An Important Component of Wise Water Management":

FINDINGS:
The City of Half Moon Bay agrees with all findings (F1 through F6) of the subject Grand Jury Report.

F1. There is a growing imbalance in the County and the region between water supply and demand.
The City agrees with the finding in part. While County and regional water demand appears to be steadily increasing, according to the Coastside County Water District's 2010 Urban Water Management Plan, the District has adequate water supplies to meet projected water demands during all hydrologic conditions through 2035.

F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.
The City agrees.

F3. **Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.**
The City agrees that the use of recycled water could provide an additional safe and reliable water source to augment other sources of supply.

F4. **Properly produced and used, recycled water poses little or no public health risk.**
The City agrees.

F5. **Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.**
While the City agrees with this sentiment, water education is primarily the function of the Coastside County Water District and other water purveyors.

F6. **The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.**
The City agrees that collaborative arrangements between the Coastside County Water District and other entities like the Sewer Authority Mid-Coastside would be of benefit to residents of the City of Half Moon Bay and unincorporated portions of San Mateo County located within the Coastside County Water District's service area.

RECOMMENDATIONS:

R6. **Engage in active dialogue with purveyors and wastewater treatment providers, as applicably, about the feasibility of developing a program for producing and distributing recycled water.**

RESPONSE: The City of Half Moon Bay can engage in active dialogue with local water purveyor (the Coastside County Water District) and wastewater treatment provider (the Sewer Authority Mid-Coastside) after they have worked out their jurisdictional issues related to production and distribution of recycled water.

R7. **Conduct any studies that may be required to develop for recycling water.**

RESPONSE: The City of Half Moon Bay will participate in a study undertaken by the local water purveyor and the wastewater treatment provider by making available relevant information it may have.

Sincerely,

Laura Snideman
City Manager

cc: Mayor and Council

TOWN OF HILLSBOROUGH

1600 FLORIBUNDA AVENUE
HILLSBOROUGH
CALIFORNIA
94010-6418

May 13, 2013

Honorable Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center, 2nd Floor
Redwood City, CA 94063-1655

Re: Grand Jury Report – "Water Recycling – An Important Component of Wise Water Management"

Dear Judge Livermore:

The Hillsborough City Council received the above referenced San Mateo County Grand Jury Report in March 2013. The report contains findings and recommendations pertaining to Hillsborough, to which Hillsborough was directed to respond in writing no later than June 4, 2013. On May 13, 2013, the Hillsborough City Council held a public meeting and approved the following responses to the Grand Jury Report findings and recommendations.

FINDINGS

F1. There is a growing imbalance in the County and the region between water supply and demand.

The Town agrees that there are reports and studies that project an imbalance between regional water supply and demand over time. The Town is also aware that there has been an overall downward trend in regional water use as compared to water demand since 2007/2008.

F2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

The Town agrees that diversification of water supply is good water management. The Town believes diversification of water supply at the city or local water agency level must be considered on a case-by-case basis.

F3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

The Town agrees that recycled water cannot completely mitigate an imbalance between water supply and demand but should be considered with other water management options where practical and feasible. The Town cannot speak to the safety of recycled water as it does not have expertise in this area.

F4. Properly produced and used, recycled water poses little or no public health risk.

The Town cannot speak to the safety of recycled water as it does not have expertise in this area.

F5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

The Town agrees that public education about regional water supply and water demand in general is important, and should include education about recycled water.

F6. The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

The Town agrees that the production and distribution of recycled water at the County or regional level should be considered. The Town does not have the expertise to determine what the benefits of collaborative arrangements of jointly produced and distributed recycled water may or may not be, particularly when weighed against other water supply options. The Town is aware that the appropriateness and cost-effectiveness of recycled water use will vary from agency to agency.

RECOMMENDATIONS

The Grand Jury recommends that the Town of Hillsborough do the following before June 30, 2015:

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

The recommendation will not be implemented because it is not warranted or reasonable, as detailed below:

The Town has considered and discussed the use of recycled water with its water purveyors and wastewater treatment providers and has found the use of recycled water unfeasible in Hillsborough for the following reasons:

1. *The Town does not have access to recycled water. The Town gravity feeds its sewage to the City of Burlingame and the San Mateo Wastewater Treatment Plants. These plants do not currently have treatment facilities to produce recycled water, nor do they have in place capital improvement plans to construct them. For example, the City of Burlingame completed a recycled water feasibility study in 2011 which determined that it is not feasible for the City of Burlingame to develop a recycled water distribution program. The results of this evaluation are documented in "Technical Memorandum – Summary of Recycled Water Supply and Demand Evaluation," dated March 25, 2011 (EKI, 2011). Additionally, there is no recycled water delivery system infrastructure in place to transport recycled water from these treatment plants to Hillsborough, nor are there capital improvement plans to construct them. The nearest recycled water plant is located in Redwood City, approximately 13 miles from Hillsborough. There is no recycled water delivery system infrastructure to transport recycled water from Redwood City to Hillsborough, nor are there capital improvement plans to construct one.*

2. *The Town does not have the local infrastructure to distribute recycled water throughout the Town. A majority of the Town is built in steep and hilly terrain, with elevations ranging from just above sea level to 600 plus feet. The distribution of recycled water in Hillsborough would require a parallel, gravity fed, distribution and storage system. It would require the installation of not only recycled water main pipes, but the construction of multiple lift stations and water pumps as well as recycled water storage facilities. The installation of such a system would not be practical nor cost-effective.*

3. *The Town is a residential community with one small sports field, a very small community garden park, several schools and a private country club that has deeded rights to non-potable surface water for irrigation. The remainder of the Town is made up of single family residential homes. The Town does not have large industry, corporate facilities, multi-family complexes or other commercial development that typically benefit from recycled water use. The use of recycled water in Hillsborough would have to be residential, and would therefore require dual plumbing (potable and recycled water pipes and meters). The Town of Hillsborough is fully developed, and existing Hillsborough residences are not equipped with dual plumbing or dual water meters. It would be cost prohibitive to equip existing Hillsborough residences with dual plumbing systems. Additionally, recycled water is typically for non-potable uses and therefore not generally provided for single family residential use. For example, the City of Redwood excludes the use of its recycled water for single family home applications. (See "Redwood City Recycled Water Use Ordinance Fact Sheet", available at http://www.redwoodcity.org/publicworks/water/recycling/index.html)*

R7. Conduct any studies that may be required to develop a program for recycled water.

The recommendation will not be implemented because it is not warranted or reasonable, as detailed below:

The use of recycled water in Hillsborough would not be cost effective or feasible for the reasons stated above and therefore does not warrant study.

Sincerely,

Jess E. Benton, Mayor
Town of Hillsborough

City of Millbrae

621 Magnolia Avenue, Millbrae, CA 94030

May 28, 2013

Hon. Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center
Redwood City, CA 94063-1655

Subject: Response to Grand Jury Report: "Water Recycling – An Important Component of Wise Water Management"

Dear Judge Livermore,

The City of Millbrae appreciates the opportunity to review and comment on the findings of the Grand Jury. This letter serves as the City's response to the recommendations found therein.

Findings:
The City of Millbrae agrees with the findings regarding water recycling per page 11 of the Grand Jury Report.

Recommendations: (page 12 of the report)

The Grand Jury's recommendations that apply to the City are as follows:

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program that could produce and distribute recycled water.

R7. Conduct any studies that may be required to develop a program for recycling water.

Response to R6 & R7: The City owns and operates its own waste water treatment facility and continues to evaluate feasibility of recycled water. The cost associated with producing a recycled water and distribution system to convey the recycled water to locations where the water can be used appropriately is high and makes installing such a system cost prohibitive. The City utilizes recycled water in the waste water treatment plant to the extent possible.

The City also has plans to include in its proposed five year Capital Improvement Plan a feasibility study of recycled water in around five years.

It is the City's intent to undertake the above mentioned items on or before June 30, 2015 as recommended in the Grand Jury Report.

The City of Millbrae is a leader in sustainability programs in San Mateo County and continues to advocate for sustainable practices. The City recently spent over $28 million in renovating the City's Water Pollution Control Plant.

The City Council of the City of Millbrae approved this response to the Grand Jury at its regularly scheduled Council meeting on May 28, 2013.

Sincerely,

Gina Papan
Mayor
City of Millbrae

CITY OF PACIFICA

170 Santa Maria Avenue • Pacifica, California 94044-2506

www.cityofpacifica.org

Scenic Pacifica

MAY 21 2013

CITY MANAGER'S OFFICE
TEL. (650) 738-7301
FAX (650) 359-6038

CITY ATTORNEY
TEL. (650) 738-7409
FAX (650) 359-8947

CITY CLERK
TEL. (650) 738-7307
FAX (650) 359-6038

CITY COUNCIL
TEL. (650) 738-7301
FAX (650) 359-6038

FINANCE
TEL. (650) 738-7392
FAX (650) 738-7411

FIRE ADMINISTRATION
TEL. (650) 991-8138
FAX (650) 991-8090

HUMAN RESOURCES
TEL. (650) 738-7303
FAX (650) 359-6038

PARKS, BEACHES & RECREATION
TEL. (650) 738-7381
FAX (650) 738-2165

PLANNING
TEL. (650) 738-7341
FAX (650) 359-5807
- **Building**
  TEL. (650) 738-7344
- **Code Enforcement**
  TEL. (650) 738-7341

POLICE DEPARTMENT
TEL. (650) 738-7314
FAX (650) 355-1172

PUBLIC WORKS
TEL. (650) 738-3760
FAX (650) 738-9747
- **Engineering**
  TEL. (650) 738-3767
  FAX (650) 738-3003
- **Field Services**
  TEL. (650) 738-3760
  FAX (650) 738-9747

WASTEWATER
TEL. (650) 738-4660
FAX (650) 355-7256

May 13, 2013

Hon. Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center; 2nd Floor
Redwood City, CA 94063-1655

RE: Grand Jury Report: "Water Recycling – An Important Component of Wise Water Management"

Hon. Judge Livermore:

This letter is in response to the March 6, 2013 Grand Jury report regarding water recycling. The City of Pacifica is not a water provider. Water service in Pacifica is provided by the North Coast County Water District (NCCWD) and that district has taken on the task of providing and promoting the use of recycled water.

The Chart of Recycled Water Survey Responses does not clearly state the role of the City. The City delivers the water to NCCWD and that district provides the water to the users. As such, the district carries out the responsibility of planning for and promoting the use of recycled water. The City has a cooperative agreement with the District for this arrangement.

This response to the Grand Jury Report: "Water Recycling – An Important Component of Wise Water Management" was approved by the City Council at the May 13, 2013 meeting of the Council.

Sincerely,

Len Stone, Mayor

TOWN of PORTOLA VALLEY
Town Hall: 765 Portola Road, Portola Valley, CA 94028 Tel: (650) 851-1700 Fax: (650) 851-4677

May 29, 2013

Honorable Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center, 8th floor
Redwood City, CA 94063-1655

RE: Response to 2012-13 Grand Jury Report
Water Recycling – An Important Component of Wise Water Management

Dear Judge Livermore:

The Town Council for the Town of Portola Valley ("Town") has reviewed the findings and recommendations in the above-referenced Grand Jury Report that affect the Town. The Town agrees with the six findings presented in the Grand Jury Report and approved the following responses to the two recommendations that were specific to the Town at a public meeting on May 29, 2013:

Recommendation No. 1
Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

Response No. 1
CalWater provides the Town's water service and the West Bay Sanitary District provides its wastewater service. The Town will discuss water recycling with CalWater during the annual meeting. The Town will cooperate with CalWater and the West Bay Sanitary District, as necessary, to implement this recommendation.

Recommendation No. 2
Conduct any studies that may be required to develop a program for recycling water.

Response No. 2
CalWater provides the Town's water service and the West Bay Sanitary District provides its wastewater service. The Town will cooperate with CalWater and the West Bay Sanitary District, as necessary, to implement this recommendation.

The Town thanks the Grand Jury for its investigation into this complex issue and for bringing this complex matter to our attention in an informative and thorough manner. Please let me know if you require additional information.

Sincerely,

John Richards
Mayor

cc: Town Council
Town Manager
Town Attorney

1017 MIDDLEFIELD ROAD
Redwood City, California 94063
Telephone (650) 780-7220
FAX (650) 261-9102
www.redwoodcity.org

May 21, 2013

Hon. Gerald J. Buchwald
Judge of the Superior Court
Hall of Justice
400 County Center, 2nd Floor
Redwood City, CA 94063
(sent via email)

Subject: Response to the Grand Jury Report: "Water Recycling – An Important Component of Wise Water Management."

Dear Judge Buchwald:

On behalf of the City Council of the City of Redwood City, I would like to thank you for the opportunity to respond to the Grand Jury Report ("Report"), dated March 6, 2013, regarding recycled water use. The following response to the Grand Jury's Recommendations ("Recommendations") was reviewed and approved by the City Council at its meeting on May 20, 2013.

The City has reviewed the Recommendations and believes the Report is factual and sound. The City of Redwood City continues to work with its business community and development community to implement the Grand Jury's Recommendations.

R1. Study expansion of [Redwood City's] programs into other non-potable uses of recycled water.

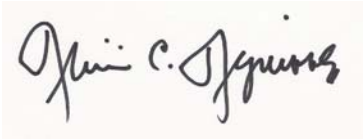
The City agrees with the recommendation. To this end, the City works closely with existing development and developers of new projects to identify ways in which recycled water can be added to their programs and projects. As noted in the Report, the uses beyond which the City is currently able to effectively use its recycled water (landscape irrigation, office building cooling towers, and dual-plumbed restrooms) rely on other regulatory agencies (such as the County Department of Public Health) and on public perception of water quality. We believe that the recommendation for a regional approach is essential for these barriers to lessen.

R2. Study geographic expansion of [Redwood City's] recycled water distribution systems.

The City agrees with this recommendation and the recommendation is being implemented. The City is presently studying the cost of a Phase 2 expansion west of Highway 101. Additionally, new opportunities for geographic expansion exist due to the increase in the City's Downtown development, the planned development of new office space by Stanford University, and discussions with San Francisco Public Utilities Commission regarding extension of the recycled water system to the Menlo Country Club.

I thank you for the opportunity to respond to your report on recycled water and our program in Redwood City.

Sincerely,



Alicia C. Aguirre, Mayor
City of Redwood City

C: City Council Members, City of Redwood City
Robert B. Bell, City Manager
Bill Ekern, Community Development Director

CITY OF SAN BRUNO

Carol Bonner
City Clerk

JUN 06 2013

May 31, 2013

Honorable Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center, 8th Floor
Redwood City, CA 94063-1655

Re: Grand Jury Report

Dear Honorable Livermore:

Attached is the formal response to the May 6, 2013 letter from Mr. John Fitton on behalf of the Grand Jury of San Mateo regarding "Water Recycling – An Important Component of Wise Water Management."

This staff report and response was generated at our Council meeting of May 28, 2013.

Please let me know if you have questions.

Sincerely,

Carol Bonner
San Bruno City Clerk

567 El Camino Real, San Bruno, CA 94066-4299
Voice: (650) 616-7058 • Fax: (650) 589-5941
http://sanbruno.ca.gov

CITY OF SAN BRUNO

Jim Ruane
Mayor

MAYOR

May 29, 2013

Honorable Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center; 8th Floor
Redwood City, CA. 94063-1655

Re: Grand Jury Report: "Water Recycling – An Important Component of Wise Water Management"

Hon. Richard C. Livermore,

Pursuant to the letter we received dated March 6, 2013 from Mr. John Fitton, on behalf of the 2012-2013 Grand Jury of the County of San Mateo, the City of San Bruno would like to take this opportunity to respond to the findings and recommendations of the Grand Jury with respect to its report titled "Water Recycling – An Important Component of Wise Water Management".

We would also like to thank the Civil Grand Jury for its work on this subject and efforts with this report regarding the use of recycled water within the region. The City of San Bruno generally agrees with the report as it outlines the potential uses and need for its delivery within San Mateo County. The City of San Bruno in collaboration with the City of South San Francisco shares in these concerns and has spent a considerable amount of time and effort over the past seven years reviewing and planning for the use within our region of recycled water produced by our co-owned plant with the City of South San Francisco. The City and its partners have spent nearly $454,000 in research and development in hopes to be able to make this project a reality. This response was approved by the City Council at its May 28, 2013 regular meeting.

The City has not seen or reviewed the data, which the Grand Jury had in its possession to arrive at the findings listed below. The City's responses to the Grand Jury's recent findings are as follows;

Finding No.1 There is a growing imbalance in the County and the region between water supply and demand.

The City of San Bruno generally agrees with this finding.

Finding No. 2. The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

The City of San Bruno generally agrees with this finding.

567 El Camino Real, San Bruno, CA 94066-4299
Voice: (650) 616-7060 • Fax: (650) 742-6515
http://sanbruno.ca.gov

Finding No. 3 Water Recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

The City of San Bruno generally agrees with this finding.

Finding No. 4 Properly produced and used, recycled water poses little or no public health risk.

The City of San Bruno generally agrees with this finding based upon its own studies in collaboration with the City of South San Francisco and information provided to it by consultants.

Finding No. 5 Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

The City of San Bruno agrees with this finding.

Finding No. 6 The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

The City of San Bruno agrees with this finding, especially given the high cost associated with recycled water distribution.

The City, therefore, is in general concurrence with all of the findings of the Grand Jury as listed above. The City's responses to the recommendations listed by the Grand Jury are as follows;

Recommendation 3 Finalize current feasibility studies.

The City of South San Francisco along with its partners finalized the feasibility study in 2007 and corollary studies through 2011.

Recommendation 4 actively purse partnerships for producing and distributing recycled water.

Since the inception of the project the cities of South San Francisco and San Bruno have partnered most closely with the San Francisco Public Utilities Commission, but also with Cal Water Service, the Cities of Millbrae, Burlingame, and the San Francisco Airport. San Bruno has also sought customer commitments from the Golden Gate National Cemetery, California Golf Club, Colma Cemeteries, and the South San Francisco School District.

Recommendation 5 Develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns.

The South San Francisco/San Bruno Water Quality Control Plant staff conduct tours of the facility and outreach to community schools to educate the public about wastewater reclamation, stormwater quality, and recycled water. Information on recycled water can be expanded upon in

the tours and presentations. Staff is currently working on new printed materials specifically targeted to information on recycled water. Staff will improve and strengthen this effort.

Please feel free to contact Klara Fabry, Public Services Director if you have any questions.

Sincerely,

Jim Ruane
Mayor

CITY COUNCIL

BOB GRASSILLI, MAYOR
MARK OLBERT, VICE MAYOR
KAREN CLAPPER
RON COLLINS
MATT GROCOTT

CITY OF SAN CARLOS

CITY COUNCIL
600 ELM STREET
SAN CARLOS, CALIFORNIA 94070

TELEPHONE: (650) 802-4219
FAX: (650) 595-6719

WEB: www.cityofsancarlos.org

May 14, 2013

Honorable Richard C. Livermore
Judge of the Superior Court
Hall of Justice
400 County Center; 8th floor
Redwood City, CA 94063-1655

Re: Civil Grand Jury Report – Water Recycling

Dear Judge Livermore,

I am writing to you on behalf of the San Carlos City Council. This will serve as the City of San Carlos' formal response to the letter from the Superior Court communicating comments made by the Civil Grand Jury titled "Water Recycling: An Important Component of Wise Water Management." The City Council has reviewed this letter at a public meeting of the Council and has authorized that it be sent.

In the report from the Civil Grand Jury, two Recommendations are made to the City of San Carlos. Here is the City of San Carlos response to the Civil Grand Jury report on this matter:

Recommendations

1. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.
   Response: We agree with the finding.

   The City of San Carlos is not a water purveyor or a wastewater treatment provider.

   San Carlos receives its water from California Water Service, a privately held water utility.

   Wastewater Treatment for San Carlos is provided by the South Bay Sewer Authority (SBSA) which is a Joint Powers Authority (JPA) that includes 4 member agencies. San Carlos is one of the 4 member agencies of SBSA and holds a seat on its governing board.

The City of San Carlos has discussed the feasibility of using recycled water with California Water Service and SBSA in the past. The City plans to continue to work with SBSA and California Water Service to see if there are opportunities to use recycled water in a cost effective manner in San Carlos in the future.

2. Conduct any studies that may be required to develop a program of recycling water.
Response: We agree with the finding.

The City of San Carlos would not be directly responsible for recycling water. That would be something that California Water Service and SBSA would be responsible for in our City.

However, the City remains open to discussing and participating in studies that could lead to the distribution and use of recycled water in San Carlos in the future if it was feasible and cost effective.

Sincerely Yours,

Bob Grassilli
Mayor

cc: City Council
City Manager
Assistant City Manager
Public Works Director
City Attorney

OFFICE OF THE MAYOR

330 West 20th Avenue
San Mateo, California 94403-1388
Telephone (650) 522-7048
FAX: (650) 522-7041
www.cityofsanmateo.org

May 20, 2013

Honorable Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center, 2nd Floor
Redwood City, CA 94063-1655

RE: City of San Mateo Response to the San Mateo Grand Jury Report "Water Recycling – An Important Component of Wise Water Management"

Dear Judge Livermore:

The City of San Mateo is in receipt of the Grand Jury's report entitled "Water Recycling – An Important Component of Wise Water Management". Pursuant to your March 6, 2013 request for response, the San Mateo City Council held a public meeting on May 20, 2013, and approved the City of San Mateo's response to the report. Below is the City of San Mateo's response to the Grand Jury's findings and recommendations.

Findings

F1. ***There is a growing imbalance in the County and the region between water supply and demand.***

F2. ***The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.***

F3. ***Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.***

F4. ***Properly produced and used, recycled water poses little or no public health risk.***

F5. ***Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.***

F6. ***The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.***

Response: The City agrees with the all of the above findings.

Recommendations

The Grand Jury recommends that the City Councils of Brisbane, Foster City, Pacifica, San Bruno, South San Francisco, and San Mateo do the following, on or before June 30, 2014:

R3. ***Finalize current feasibility studies.***

Response: The recommendation has been implemented. The Recycled Water Market Survey was completed in April 2013 and was presented to the City Council on May 6, 2013. The City of San Mateo will now take the next step in studying the feasibility of producing recycled Water and will apply to the California State Water Resource Control Board for grant funding to develop a Recycled Water Facilities Plan.

R4. ***Actively pursue partnerships for producing and distributing recycled water.***

Response: The recommendation has been implemented. The City of San Mateo and the City of Foster City jointly own and operate the Waste Water Treatment Plant and have an active partnership. Recycled water would be produced at the Waste Water Treatment Plant; however no infrastructure currently exists to produce the recycled water to meet the State's Title 22 standards. The necessary tertiary treatment infrastructure to process and treat the waste water to meet the State standards will be identified in the 20-year Waste Water Treatment Plant Master Plan which is currently in development. For the recycled water distribution system, the City's Recycled Water Market Survey developed a conceptual recycled water distribution system. As mentioned above, the City will now pursue grant funding to develop a Recycled Water Facilities Plan which will further design the recycled water distribution system. The City has had preliminary partnership discussions with California Water Service to assist with the construction, operation and maintenance of the recycled water distribution system.

R5. Develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns.

Response: The recommendation has been implemented. The recently completed Recycled Water Market Survey developed an outreach flyer addressing what recycle water is, the State's safety regulations of it and the City's efforts to study the feasibility of producing and distributing recycled water in the City of San Mateo. Additionally, public outreach and education materials developed by the City's consultant that are regionally based and not specific to the City of San Mateo will be used to further educate the public to address the public health risk concerns.

Sincerely,

David Lim
Mayor

OFFICE OF THE MAYOR

May 20, 2013

Honorable Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center, 2nd Floor
Redwood City, CA 94063-1655

Re: Grand Jury Report: "Water Recycling – An Important Component of Wise Water Management"

Dear Judge Livermore,

Pursuant to the letter we received dated March 6, 2013 from Mr. John Fitton, on behalf of the 2012-2013 Grand Jury of the County of San Mateo, the City of South San Francisco would like to take this opportunity to respond to the findings and recommendations of the Grand Jury with respect to its report titled "Water Recycling – An Important Component of Wise Water Management".

We would also like to thank the Civil Grand Jury for its work on this subject and efforts with this report regarding the use of recycled water within the region and South San Francisco and generally agrees with the report as it outlines the potential uses and need for its delivery within San Mateo County. The City of South San Francisco shares in these concerns and has spent a considerable amount of time and effort over the past seven years reviewing and planning for the use within our region of recycled water produced by our co-owned plant with the City of San Bruno. The City and its partners have spent nearly $454,000 in research and development in hopes to be able to make this project a reality. This response was discussed with our Council at a public meeting on April 17, 2013 and reviewed and approved at its May 8th, 2013 regular meeting.

The City's responses to the Grand Jury's recent findings are on the following pages.

Finding No. 1 There is a growing imbalance in the County and the region between water supply and demand.

The City of South San Francisco generally agrees with this finding in concept, however, we have not seen nor reviewed the data which the Grand Jury has in its possession to come to this finding on its own.

Finding No. 2 The County and Cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

The City of South San Francisco generally agrees with this finding.

Finding No. 3 Water Recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and Cities maintain a safe and reliable water source.

The City of South San Francisco generally agrees with this finding in concept, however, we have not seen nor reviewed the data which the Grand Jury has in its possession to come to this finding on its own.

Finding No. 4 Properly produced and used, recycled water poses little or no public health risk.

The City of South San Francisco generally agrees with this finding based upon its own studies and information provided to it by consultants, however, we have not seen nor reviewed the data which the Grand Jury has in its possession to come to this finding on its own.

Finding No. 5 Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

The City of South San Francisco agrees with this finding.

Finding No. 6 The County and Cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

The City of South San Francisco agrees with this finding.

The City, therefore, is in general concurrence with all of the findings of the Grand Jury.

Therefore, the City reports to you its responses as well to the recommendations listed by the Grand Jury as follows;

Recommendation 3 Finalize current feasibility studies.

The City of South San Francisco along with its partners finalized the feasibility study in 2007 and corollary studies thorough 2011.

Recommendation 4 actively purse partnerships for producing and distributing recycled water.

Since the inception of the project the cities of South San Francisco/San Bruno have partnered most closely with the San Francisco Public Utilities Commission, but also with Cal Water Service, the Cities of Millbrae, Burlingame, and the San Francisco Airport. We have also sought customer commitments from the Golden Gate National Cemetery, California Golf Club, Colma Cemeteries, and the South San Francisco School District.

Recommendation 5 Develop educational programs designed to highlight the need for recycled water, while addressing public health risk concerns.

The South San Francisco/San Bruno WQCP staff conducts several tours of our facility and outreach to community schools to educate the public about waste water reclamation, stormwater quality, and recycled water. The recycled water element, which is discussed, can be improved upon and complimentary printed materials provided as well. We will improve and strengthen this effort.

Please feel free to contact me if you have any questions.

Sincerely,

Pedro Gonzalez

Pedro Gonzalez, Mayor
City of South San Francisco

PG/tw

Attachment: Council Minutes of Action

AGENDA *ACTIONS TAKEN*

CITY COUNCIL
CITY OF SOUTH SAN FRANCISCO

REGULAR MEETING
MUNICIPAL SERVICES BUILDING
COUNCIL CHAMBERS
33 ARROYO DRIVE
SOUTH SAN FRANCISCO, CA

WEDNESDAY, MAY 8, 2013
7:00 P.M.

PEOPLE OF SOUTH SAN FRANCISCO

You are invited to offer your suggestions. In order that you may know our method of conducting Council business, we proceed as follows:

The regular meetings of the City Council are held on the second and fourth Wednesday of each month at 7:00 p.m. in the Municipal Services Building, Council Chambers, 33 Arroyo Drive, South San Francisco, California.

Public Comment: For those wishing to address the City Council on any Agenda or non-Agendized item, please complete a Speaker Card located at the entrance to the Council Chamber's and submit it to the City Clerk. Please be sure to indicate the Agenda Item # you wish to address or the topic of your public comment. California law prevents the City Council from taking action on any item not on the Agenda (except in emergency circumstances). Your question or problem may be referred to staff for investigation and/or action where appropriate or the matter may be placed on a future Agenda for more comprehensive action or a report. When your name is called, please come to the podium, state your name and address (optional) for the Minutes. COMMENTS ARE LIMITED TO THREE (3) MINUTES PER SPEAKER. Thank you for your cooperation.

The City Clerk will read successively the items of business appearing on the Agenda. As she completes reading an item, it will be ready for Council action.

PEDRO GONZALEZ
Mayor

KARYL MATSUMOTO
Mayor Pro Tem

MARK N. ADDIEGO
Councilman

RICHARD A. GARBARINO
Councilman

PRADEEP GUPTA
Councilman

FRANK RISSO
City Treasurer

KRISTA MARTINELLI
City Clerk

BARRY M. NAGEL
City Manager

STEVEN T. MATTAS
City Attorney

PLEASE SILENCE CELL PHONES AND PAGERS
HEARING ASSISTANCE EQUIPMENT AVAILABLE FOR USE BY THE HEARING IMPAIRED AT CITY COUNCIL MEETINGS

In accordance with California Government Code Section 54957.5, any writing or document that is a public record, relates to an open session agenda item, and is distributed less than 72 hours prior to a regular meeting will be made available for public inspection in the City Clerk's Office located at City Hall. If, however, the document or writing is not distributed until the regular meeting to which it relates, then the document or writing will be made available to the public at the location of the meeting, as listed on this agenda. The address of City Hall is 400 Grand Avenue, South San Francisco, California 94080.

CALL TO ORDER	*7:04 P.M.*
ROLL CALL	*All present*
PLEDGE OF ALLEGIANCE	*Recited*

PRESENTATIONS

• Farmer's Market Presentation.	*Presented*
• Proclamation for Public Service Recognition Week.	*Presented*
• Recognition of New and Promoted Employees.	*Presented*
• Proclamation for National Public Works Week, May 19-25, 2013.	*Presented*
• Proclamation in honor of Asian Pacific American Heritage Month.	*Presented*

AGENDA REVIEW	*No changes*
PUBLIC COMMENTS	*Given*

ITEMS FROM COUNCIL

• Announcements.	*Given*
• Committee Reports.	*Given*
• Update on Community Coalition Initiatives by the Peninsula Conflict Resolution Center.	*Given*
• City Selection Committee: LAFCO and HEART positions.	*Motion to support Councilman Garbarino*

CONSENT CALENDAR

1.	Motion to approve the Minutes of the Meeting of April 10, 2013.	*Approved*
2.	Motion confirming payment registers for May 8, 2013 in the amount of $5,702,829.94.	*Confirmed*
3.	Motion to accept the Paradise Valley Pocket Park Project (Project No. pk1208) as complete in accordance with the plans and specifications.	*Approved*
4.	Motion to approve the response to the San Mateo County Grand Jury Report regarding Language Services.	*Approved*
5.	Motion to approve the response to the 2012-2013 San Mateo County Grand Jury Report "Water Recycling – an Important Component of Wise Water Management."	*Approved*

6.	Resolution amending the salary schedule by assigning a salary range for the newly created classification of Financial Services Manager.	***Resolution No. 38-2013 Unanimous***
7.	Resolution amending the salary schedule by assigning a salary range for the newly created classification of Deputy Police Chief.	***Resolution No. 39-2013 Unanimous***
8.	Resolution approving a Consulting Services Agreement with Ghirardelli Associates of San Francisco, California, for Construction Management Services for the Forbes Boulevard Bike Lane Improvement Project (Project No. st1306) in an amount not to exceed $332,714.	***Resolution No. 40-2013 Unanimous***
9.	Resolution authorizing the Mayor to execute the Cooperative Agreement No. 04-2480 with the State of California for work elements performed for the Project Initiation Document (PID) for the US 101/Produce Avenue Interchange Project and committing approximately $150,000 in non-federal matching funds.	***Resolution No. 41-2013 Unanimous***
10.	Resolution authorizing the purchase of emergency response lighting, electronics, storage, tools and equipment for three command vehicles in an amount not to exceed $118,957.93; amending the City's 2012-13 Equipment Replacement Fund; and authorizing the City Manager to enter into purchase agreements for the emergency response lighting, electronics, storage, tools and equipment.	***Resolution No. 42-2013 Unanimous***

PUBLIC HEARING

11. Gateway Business Park Master Plan
BioMed Reality-Owner/Applicant
800-1000 GATEWAY BLVD
P08-0034: MPM13-0001, PP13-0001, TDM13-0003 & DAA13-0001

Waive reading and introduce an ordinance approving a Development Agreement; and an appeal of the Planning Commission's approval of: 1) Master Plan Modifications to the Gateway Business Park Master Plan to allow for a revised phasing plan and modifications to the interior circulation and building designs, 2) a revised Transportation Demand Management Plan, and 3) a new Precise Plan for Phase I which consists of a 451,485 square foot office/research and development building and a 47,938 square foot amenities building with above-ground and subsurface parking, in accordance with SSFMC Chapters 19.60, 20.220, 20.400, 20.480, 20.490 & 20.530.	***Ordinance Introduced Unanimous*** ***Resolution No. 43-2013 Unanimous*** ***Resolution No. 44-2013 Unanimous***

COMMUNITY FORUM — ***Given***

ADJOURNMENT — ***10:44 P.M.***

The Town of
Woodside

April 24, 2013

The Honorable Richard C. Livermore
Judge of the Superior Court
c/o Charlene Kresevich
Hall of Justice
400 County Center, 2nd Floor
Redwood City, CA 94063-1655

RE: 2012-13 GRAND JURY REPORT - *WATER RECYCLING - AN IMPORTANT COMPONENT OF WISE WATER MANAGEMENT*

Dear Judge Livermore:

The Town Council of the Town of Woodside wishes to thank the 2012-13 Grand Jury for its service. The Town Council has reviewed the report entitled *Water Recycling - An Important Component of Wise Water Management* and reviewed the findings, conclusions and recommendations of the Grand Jury at its public meeting of April 23, 2013, and approved the following responses:

FINDINGS

P.O. Box 620005
2955 Woodside Road
Woodside CA 94062

Based on the information included in the Grand Jury Report, the Town Council agrees with the Grand Jury's findings:

1. There is a growing imbalance in the County and the region between water supply and demand.

2. The County and cities must reduce their residents' dependence on imported water by diversifying their water supply sources.

3. Water recycling alone cannot completely mitigate the growing imbalance between water supply and demand, but used in conjunction with other water management options it can help the County and cities maintain a safe and reliable water source.

4. Properly produced and used, recycled water poses little or no public health risk.

5. Educational programs are necessary to highlight the growing importance of recycled water in the County and the region.

6. The County and cities would benefit from collaborative arrangements to jointly produce and distribute recycled water where appropriate.

650-851-6790
Fax: 650-851-2195
townhall@woodsidetown.org

RECOMMENDATIONS

The Grand Jury recommended that on or before June 30, 2015, the Town Council:

R6. Engage in active dialogue with water purveyors and wastewater treatment providers, as applicable, about the feasibility of developing a program for producing and distributing recycled water.

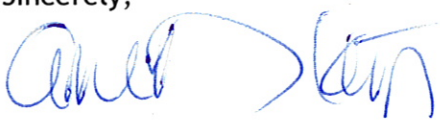
R7. Conduct any studies that may be required to develop a program for recycling water.

Response for Recommendations R6 and R7: The Town will engage in a dialogue with the California Water Service Company (CalWater) about the feasibility of developing a program for distributing recycled water in Woodside. If the distribution of recycled water becomes a feasible option, the Town will work with CalWater to conduct any studies that may be required to develop a program.

On behalf of the Town Council, I would like to extend our thanks for the opportunity to review and respond to the work of the 2012-13 Grand Jury.

Please do not hesitate to call Kevin Bryant, at (650) 851-6790, should you require any further information.

Sincerely,



Anne Kasten
Mayor