THE CITY OF SAN DIEGO

REPORT TO THE CITY COUNCIL

DATE ISSUED: July 19, 2006 REPORT NO.: 06-100

ATTENTION: Natural Resources and Culture Committee, Agenda of July 26, 2006

SUBJECT: Water Reuse Study

REFERENCE: Resolution of the City Council Regarding the Study of Increased Aspects of Water Reuse, Resolution Number R-298781 adopted on January 13, 2004

City Manager's Report 05-156, issued July 13, 2005

Natural Resources and Culture Committee actions November 19, 2003

REQUESTED ACTION:

1. Should the City Council accept the Water Reuse Study Final Draft Report (Study Final Draft Report) as fulfillment of the elements outlined in Resolution R-298781?

STAFF RECOMMENDATION:

1. Accept the Study Final Draft Report as fulfillment of the elements outlined in Resolution R-298781.
2. Accept the Study Final Draft Report as fulfillment of the Recycled Water Master Plan Update as required by Municipal Code Chapter 66, Article 4, Division 8.

EXECUTIVE SUMMARY**:**

On January 13, 2004, the San Diego City Council (Council) directed the City Manager to conduct a study to evaluate options for increasing the beneficial use of the City's recycled water (Resolution R-298781). During the Council hearing, staff was directed to research and produce a report on specific opportunities for increasing recycled water use, to compile research studies on the health effects of various reuse options, and include a public participation component in the effort. The Study Final Draft Report outlines the entire process undertaken including, but not limited to, details of stakeholder involvement and public outreach, developing criteria, refining options, formulating strategies, and water quality research. **(Attachment 1)**

NR&C Authorization and Study Scope of Work

The City's Natural Resources and Culture Committee (NR&C) met on November 19, 2003, and heard presentations on alternative water sources. At this meeting, the NR&C moved unanimously to authorize the City Manager to embark on a study of all aspects of water reuse, including potable reuse, as well as all other alternative water supply issues and to report back to the Committee. Presentations at the meeting included testimony on the State of California's June 2003 report titled *Water Recycling 2030: Recommendations of California's Recycled Water Task Force*. Presentations were also made by representatives of local and state water agencies, the Bay Council group and others.

The NR&C's consideration to authorize the Study has its basis in a Settlement Agreement between the City and the Bay Council, a consortium of environmental groups consisting of Coastkeeper (formerly Baykeeper), Surfrider Foundation and Sierra Club over the City's National Pollutant Discharge Elimination System (NPDES) permit to discharge treated sewage off Point Loma. The Bay Council filed an appeal with the Environmental Appeals Board (EAB) concerning the continued applicability of the Ocean Pollution Reduction Act (OPRA) to the NPDES permit. In an effort to resolve these differences, the parties met regularly from January 2003 to March 2004 and agreed on a Settlement Agreement and Joint Stipulation for Withdrawal of Appeals. The Settlement Agreement commits the City to (a) evaluate improved ocean monitoring, (b) pilot test biological aerated filters as a form of technology to increase solids removal, and (c) study increased water reuse including reservoir augmentation. The Water Reuse Study is intended to fulfill the City's commitment to study increased water reuse.

Specifics for the Study's scope of work as listed in the NR&C action on November 19, 2003, were:

- embark on a year-long study on all aspects of water reuse
- include potable reuse as well as all other alternative water supply issues
- include a general assessment of costs and benefits of water reuse projects
- include a consideration of public health, public acceptance, water costs, and water supply reliability issues
- include a compilation of research/studies concerning reservoir augmentation
- include information concerning potential impacts of pharmaceuticals, endocrine disruptors, personal care products and additional constituents of the wastewater stream on water quality and health

At the January 13, 2004, Council meeting which authorized and designated funding for the Study, Council discussed and directed the addition of the following components to the NR&C designated parameters for the Study:

- include a participatory process to discuss/develop reuse opportunities
- account for diverse stakeholder viewpoints,
- base study upon sound technical analysis/science
- build upon past City efforts, and
- utilize recent knowledge and information gained through growth in the use of recycled water nationwide and abroad, and
- analyze the use of graywater

Recycled Water Master Plan Update 2005 Combined with Water Reuse Study

A component of the Study work is the completion of the Recycled Water Master Plan Update 2005 (Master Plan Update). This update was underway by the Water Department at the time of the January 2004 Council direction to implement the Study. The Master Plan Update includes a market assessment and a development and planning effort to expand the reclaimed water system to serve more customers for non-potable uses such as irrigation, manufacturing and commercial operations.

The Master Plan Update was undertaken to comply with the City's Water Reclamation Ordinance, adopted by the City Council in 1989 and incorporated into the Municipal Code

(Chapter 66, Article 4, Division 8), that requires the City to have a Recycled Water Master Plan to define, encourage, and develop the use of recycled water within City boundaries. Master Plans are to be updated every five years, with the most recent update in 2000.

The Master Plan Update analyzed existing and future recycled water systems including the location and sizes of the reclamation treatment plants, distribution pipelines, pump stations and reservoirs. This information would also help the City make preliminary determinations as to which existing potable water customers could be converted to use recycled water for irrigation and commercial purposes.

One of the water reuse options included in the scope of work for the Study is to continue expanding the system for irrigation and industrial customers. The Mater Plan Update documents the Study's evaluation of opportunities to expand the City's existing recycled water distribution system for additional non-potable uses.

The City's Master Plan Update has been completed and is dated September 2005. Details on the Master Plan Update can be found in the Study Final Draft Report in the "Non-potable Reuse Opportunities" section.

Study Implementation and Funding

Implementation of the Study was undertaken by the Water Department's Water Policy and Strategic Planning Division. The Department assembled a team of City staff, consultants and technical experts. The environmental engineering firm working on the Master Plan Update was retained to produce the Study Report. The City's Metropolitan Wastewater and Water Departments jointly shared Study costs. Funding for the Study was authorized on January 13, 2004 (Resolution R-298781), to supplement the amount previously authorized for the Master Plan Update work.

Reporting back to the Natural Resources & Culture Committee

Staff reported back to the NR&C on July 20, 2005, with a presentation of Study activities to date. The presentation included Study options, criteria, public outreach activities, Independent Advisory Panel (IAP), and an update on the second City of San Diego Assembly on Water Reuse (Assembly) held the previous week. Several members of the public testified, including an Assembly participant, representatives from Surfrider, Coastkeeper and the Chair of the Public Utilities Advisory Commission (PUAC) who indicated the Commission would begin reviewing the Study the following month. Committee members present expressed their interest in reading the Study Report and encouraged City staff to make presentations to community groups and in each council district to inform and educate residents about the Study strategies.

Public Utilities Advisory Commission

A presentation on the Study was made at the August 15, 2005, meeting of the PUAC. Following the presentation, Commissioners engaged in a lengthy discussion on Study strategies and asked City staff a number of questions about those areas of the Study associated with advanced water treatment results, public involvement efforts, outcome of the Assembly workshop and the nexus between water supply and population growth. Commissioners adopted a motion to accept the Water Reuse Study Interim Report (Study Interim Report), and referred the report to the Public Education Committee for technical review.

The PUAC Public Education Committee met on November 4, 2005, to discuss the Study. In advance of the meeting, committee members reviewed the Study Draft Report and the Assembly Workshop II Statement. City staff gave an overview of the Study process and technical findings. Following a lengthy discussion, the Committee approved four recommendations on the Study to present at the November PUAC meeting.

1. Recommend Council and Mayor adopt the Assembly Workshop II Statement as the City's policy on water reuse.
2. Acknowledge completion of tasks listed in the January 2004 Council Resolution R-298781 on the Study.
3. Urge Council and Mayor to direct staff to develop a scope of work and strategy to implement recommended actions detailed in the Assembly Workshop II Statement.
4. Request City staff report back at least annually to the PUAC on implementation progress.

At the November 21, 2005 meeting of the PUAC, the Public Education Committee chair reported on the results of the November 4th meeting. Several members of the public spoke in favor of increased water reuse, including three Assembly participants and a representative from the San Diego Regional Chamber of Commerce. After extensive discussion, Commissioners adopted a resolution that included the four recommendations forwarded by the PUAC Public Education Committee.

An Identified Need for Local Water Supplies

Currently, the 1.3 million people living in San Diego use an average of 210 million gallons per day (MGD) of potable water. The City's population is projected to increase 50 percent in the next 25 years. Even with additional water conservation measures, projections show that population growth will increase the demand for potable water by approximately 25 percent, or an additional 50 MGD, by 2030.

An annual average of 85% percent of the City's existing water supply is imported from the Colorado River and Northern California. The City has long recognized the need to develop local water supplies to balance and reduce this dependence on imported water. The City's 1997 *Strategic Plan for Water Supply* and the *City of San Diego Long-Range Water Resources Plan (2002-2030)* both identify the need for the City to develop additional local water supply sources as a means of providing reliability and protection from water supply shortages. This goal was also echoed in a 1999 Grand Jury report.

On October 10, 2003, the City Manager issued City Manager's Report 03-203, *Status Report on City of San Diego Long-Range Water Resources Plan (2002-2030)* which identified reclaimed water as an important source of a locally produced water supply. The report also identified the City's two water reclamation plants as important sources of reclaimed water to reduce the City's dependence on imported water.

Current Recycled Water System

The City has been delivering recycled water to customers for non-potable irrigation and industrial use since the completion of the North City Water Reclamation Plant (NCWRP) in 1997. The NCWRP was a major investment that highlighted the City's commitment to recycled water and achieving the beneficial reuse goals associated with the Plant has been a compelling

factor in the decision-making process associated with projects identified in the Recycled Water Master Plans. The U.S. Environmental Protection Agency (EPA) awarded the City a construction grant of $69.5 million for the NCWRP. The total project cost of the plant was $205 million. The EPA grant award included conditions establishing reuse goals for the NCWRP. These goals were created to measure the City's progress in achieving the beneficial reuse of recycled water produced at the plant. The goals are: reuse 25% of flows treated, or 6 MGD, by 2003; and, reuse 50% of the flows treated, or 12 MGD, by 2010.

The South Bay Water Reclamation Plant (SBWRP) was completed in 2002 to provide recycled water to the southern areas of the region. The NCWRP is a 30 MGD treatment capacity plant, with a non-potable recycled water production capability of 24 MGD. The SBWRP is a 15 MGD treatment capacity plant with a non-potable recycled water production capability of 13.5 MGD. As of March 31, 2006, there are 363 meters connected to the system, which includes a single meter connection to the City of Poway. Of the City of San Diego's retail customers, 99% of their recycled water use is for irrigation and the other 1% for commercial and industrial use.

Recycled Water Options Included in the Study and Evaluation Criteria

Staff was directed to conduct a year-long study evaluating all aspects of a viable increased water reuse program, including, but not limited to, the following reuse options:

- continued expansion of the system for irrigation and industrial customers
- create storage reservoirs
- add to streams or create wetlands
- recharge, improve or protect groundwater basins
- add to aquifers used for drinking water supplies after additional advanced water treatment
- add to reservoirs storing untreated drinking water supplies after additional advanced water treatment (reservoir augmentation)
- analysis of graywater use.

The greatest challenge to maximizing water reuse is the seasonality of usage. As the majority of water produced is used for irrigation purposes, usage naturally increases when the weather is warm and dry, and conversely decreases when it is cool and raining. As a result of this seasonal variation, reclaimed water usage may always be approximately half of the annual amount available.

The following evaluation criteria for each water reuse option were ratified by the first City of San Diego Assembly on Water Reuse at their October 2004 workshop (Assembly Workshop I).

- health and safety
- social value
- environmental value
- local water reliability
- water quality
- operational reliability
- cost
- ability to implement

Water Reuse Study Mission Statement and Objective

The Study team developed a Mission Statement and Study Objective:

Mission Statement: To pursue opportunities to increase local water supply and reliability, and optimize local water assets, through a comprehensive study of recycled water.

Objective: To conduct an impartial, balanced, comprehensive and science-based study of all recycled water opportunities so that the City can meet current and future water supply and reuse needs.

Public Involvement Process

The Study developed a variety of ways to inform City residents about the Study. A key component was creating a 67-member group, the City of San Diego Assembly on Water Reuse (Assembly). Members of this stakeholder group were selected by the Mayor, Council offices, community groups, business organizations, and professional associations. City recycled water customers, and environmental representatives were also part of the Assembly group. Two three-day American Assembly-style workshops were conducted in October 2004 and July 2005. Assembly participants produced statements of opinion at the conclusion of each workshop. The first workshop focused on the study parameters, options under consideration and the evaluation criteria proposed for analyzing each option. Participants at the second workshop reviewed the June 2005 Interim Report that outlined strategies to increase the use of recycled water.

Public involvement activities also included a speakers bureau, stakeholder interviews, creation of a Study website, a telephone survey, electronic news briefs, a telephone hotline and informal opinion surveys, among others. Media coverage has been extensive with front page stories in the local newspaper and news stories on local television stations. An educational video on the Study airs on City TV, available on both local cable company channels, and many copies of the video have been distributed in the community.

Public Involvement Summary* **(Attachment 2)**

Speakers Bureau – 135 total presentations (99 to community groups and 36 to non-community groups)
Stakeholder interviews - 27
Media coverage – 29 newspaper articles, 1 radio interview, 4 TV news stories
Letters of Support – 22 received
Website visits - 6,933
Electronic newsletters – posted on website, published monthly since December 2004
Media briefings – 3 held with editorial staff
Informal opinion survey – 432 completed, on-line and hardcopy version
Facility tours – 16 tours of City reclamation plants
Telephone opinion survey - 406 respondents (surveys conducted 5/19/04-6/7/04)
Miscellaneous:
- Water bill insert - fall 2005 reaching 265,000 customer accounts
- Voter pamphlet, full page ad (for city-wide election on 7/26/05)
- Article in Water Department's 2004 Annual Drinking Water Quality Report; 565,744 copies mailed June 2005
- 25-minute educational video – airing continuously on City TV24 since Sept. 2005

Telephone hotline and e-mail account – posted on Study materials, checked by staff
Focus groups – two (conducted on 6/9/04 and 7/27/04)

* As of March 31, 2006 except where noted

Technical Review of Study Work

The Study has an Independent Advisory Panel (IAP), whose role is to ensure all technical and scientific components of the Study are accurate, current and thoroughly reviewed. Panel members are contracted through the National Water Research Institute Research. IAP members are renowned experts in the fields of water and wastewater technology, public health, epidemiology, toxicology, medicine, microbiology, water quality, economics, environmental engineering and chemistry, public utilities administration and industry regulations. Three of the 11 panel members reside in San Diego, one of whom is a local citizen representing City ratepayers.

The IAP was formed to ensure an unbiased and thorough examination of all possible water reuse opportunities. Panelists attended three meetings in San Diego to hear presentations on Study aspects, local water reuse issues and to hold face-to-face discussions on the Study. Several IAP members attended the two Assembly workshops. Panelists also reviewed and provided written comments on local aspects of water reuse, the Study Interim Report and all technical memoranda within their respective areas of expertise. Following an IAP meeting held in December 2005 to review the Study Draft Report, panel members prepared and sent to the City a letter that summarized their findings. The following are excerpts from this letter:

The Panel determined that a thorough technical review of viable water reuse strategies has been conducted by the City and the proposed water reclamation technologies will produce water that will meet or exceed all health and safety requirements.

It is the unanimous conclusion of the Panel (IAP) that appropriate alternative water reuse strategies for the City of San Diego have been identified, and that these alternatives have been presented clearly so that the citizens of the City of San Diego can make informed choices with respect to water reuse.

Water Quality Research Studies Related to Reservoir Augmentation Option

Specific components in the Study's scope of work, according to the NR&C action on November 19, 2003 were:

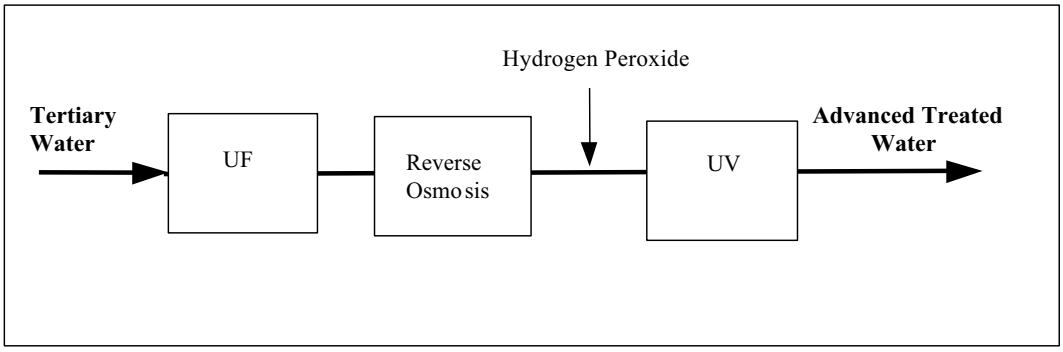
- include a compilation of research/studies concerning reservoir augmentation
- include information concerning potential impacts of pharmaceuticals, endocrine disruptors, personal care products and additional constituents of the wastewater stream on water quality and health

In addition to a comprehensive review of successful and planned indirect potable reuse (IPR) projects and a discussion of the most relevant case studies in the Study Draft Report, research studies were undertaken at the NCWRP to analyze and test the water quality of an advanced water treatment (AWT) process on tertiary level recycled water produced at the plant. The AWT steps would be necessary and required by the State of California Department of Health Services before recycled water could be used to supplement drinking water supplies in underground aquifers or open reservoirs. The AWT steps are ultrafiltration (UF), reverse osmosis and advanced oxidation with ultraviolet light (UV) and hydrogen peroxide. The final AWT product water is similar in quality to distilled water. The Orange County Water District is using the same

treatment process for its 70 MGD Groundwater Replenishment Project that will go online in 2007. (See illustration on next page)

Researchers conducted analyses for a wide range of inorganic and organic compounds on tertiary level recycled water and product water at each step of the AWT process. Analyses conducted in 2005 included all water quality criteria required to monitor compliance with federal and state drinking water standards, plus inorganic constituents, organic compounds, microbial contaminants, endocrine disrupting compounds (EDCs) and pharmaceutical and personal care products (PPCPs).

Initial testing of the recycled water produced by the NCWRP found that some EDCs and PPCPs were present in low concentrations. The AWT process was determined to remove EDC's &PPCP's present in the recycled water to levels below the detection limits of the most sophisticated test methods currently available. Regulated contaminants in the AWT product water also were well below federal and California drinking water standards. The AWT process provides an effective multiple barrier approach to producing recycled water suitable for reservoir augmentation projects as outlined in the Study water reuse strategies.



Introduction to the Six Water Reuse Strategies Identified in the Report

The Study team began by using the water reuse options identified by the Council in Resolution R-298781, and researched possible strategies to utilize more recycled water from the City's two water reclamation plants. As each reuse option was reviewed, it was also evaluated based on the criteria approved by the Assembly at their first workshop in October 2004.

Each strategy begins with the City's existing and planned recycled water projects, and then adds projects over a series of steps. The projects included in each step were organized based on a number of considerations including:

- maximizing the use of recycled water based on available supplies at each phase
- selecting lower-cost projects before a higher-cost project
- maximizing the ability to build upon existing or previous phase infrastructure.

The strategies were designed in part to provide:

- a balanced and diverse set of non-potable and indirect potable strategies
- a range of phases for each strategy that adds new amounts of recycled water usage
- a geographically balanced mix of projects, utilizing both water reclamation plants and their potential service areas.

Some water reuse options did not meet the criteria for inclusion as a viable strategy in the Study Final Draft Report. All options were analyzed in the same manner as the other options for cost effectiveness, feasibility, etc. The two water reuse options that were not included as part of the six strategies outlined in the Study Final Draft Report are: 1) recharge, improve or protect groundwater basins; and, 2) add to aquifers for storage or as drinking water supplies after advanced water treatment. The Study evaluated the feasibility of a groundwater recharge project and a groundwater indirect potable reuse project for the City's groundwater basins. These options were not included in any Study strategies due to regulatory and permitting hurdles, groundwater basin capacity, cost, ability to implement and capability to discharge brine.

The Assembly adopted a statement at the conclusion of its July 2005 workshop supporting all strategies to varying degrees. There was unanimous support for North City strategy NC-3 which includes a reservoir augmentation project at San Vicente Reservoir. The Assembly was split on supporting the South Bay strategies between a reservoir augmentation project at Lower Otay Reservoir (SB-3) and the expansion of the existing distribution system (SB-1). (See the Assembly Workshop II Statement included in the Study Final Draft Report). Summaries of the three strategies for the NCWRP (**NC-1, NC-2** and **NC-3**) and for the SBWRP (**SB-1, SB-2 and SB-3**) can be found in **Attachment 3.**

Other Recycled Water Indirect Potable Reuse Projects

There are several other indirect potable reuse projects utilizing advanced treated recycled water for groundwater recharge, aquifer protection or reservoir augmentation. These projects, which serve as models for public acceptance of projects utilizing recycled water as a source of drinking water, were researched as part of the Study and are similar to **NC-2, NC-3, SB-2,** and **SB-3.**

Location of Project	**Recycled water produced**
El Paso, TX	4-5 MGD
Fairfax County, VA	54 MGD
Orange County, CA	70 MGD (on line 2007)
Singapore	3 MGD

Graywater Use

Graywater is included in the Study to complete a comprehensive review of opportunities associated with beneficially reusing the community's wastewater. Graywater is domestic wash water, typically from sinks, showers and clothes washing machines, and excludes "blackwater" from toilets, kitchen sinks with garbage disposals and other sources containing high concentrations of organic waste. Some of the benefits provided by graywater use: conserves potable water (potential cost savings reflected in water bills), environmental (less discharge of fertilizers into the environment due to nutrients contained in graywater), possible cost savings to graywater system owners due to less fertilizer needed, and may be viewed as a valuable domestic water source by homeowners and policymakers in communities with limited water resources due to rising water costs, water shortages or drought restrictions.

In California, graywater may be used for landscape irrigation on a wide range of sites, from single-family to industrial locations. However, graywater may not be used to irrigate vegetable gardens and may only be used on the property where it is generated.

Individual property owners are responsible for installing and maintaining graywater systems. Typically, graywater systems require a separate plumbing system, surge tank, transfer pump and a subsurface irrigation system. Graywater is subject to little or no treatment, though there are commercially available systems that include sand filters and settling tanks. Graywater differs from recycled water in that it has not undergone a high level treatment process at a centralized water reclamation plant. Use of graywater is a decentralized form of untreated wastewater reuse and is permitted only for subsurface irrigation contained within the property where it is generated.

The cost benefit of a graywater system will vary depending on potable water rates, the type of system installed, whether the installation is for a new structure or a retrofit of an existing structure, soil composition, the duration that the system is used, operation and maintenance costs, and whether incentives are available from agencies to offset costs born by the user. Typically, it is easier to install graywater systems in new structures as dual piping can be designed and installed appropriately from the start. Retrofitting existing structures in most instances may be cost prohibitive.

FISCAL CONSIDERATIONS:
Not applicable at this time. An analysis of the costs to implement each water reuse strategy is included in the Study Final Draft Report; however, any strategy that is pursued will require a detailed analysis such as feasibility studies, facility citing analysis, research to fulfill regulatory requirements, etc. This additional work goes beyond that contained in this Study will need additional authorization and funding.

PREVIOUS COUNCIL AND COMMITTEE ACTIONS:
August 12, 1997
Council adopted the Strategic Plan for Water Supply (1997-2015) that identifies options for developing and using local water supplies with emphasis on the utilization of reclaimed water.

January 19, 1999
Council adopted Resolution R-291210, directing the City Manager not to spend any monies on water repurification until options for such reuse are evaluated and further direction is given by Council.

December 9, 2002
Council adopted the Long-Range Water Resources Plan which emphasizes a diverse water portfolio by developing local water supplies.

October 10, 2003
City Manager's Report 03-203, "Status Report on City of San Diego Long-Range Water Resources Plan (2002-2030)" was issued identifying reclaimed water as an important source of a locally produced water supply. The report also identified the City's two water reclamation plants as important sources of reclaimed water to reduce the City's imported potable water demand.

November 19, 2003
The NR&C heard a full presentation on Alternative Water Sources and unanimously recommended that the City Manager conduct a study of all aspects of increased water reuse to satisfy a settlement agreement with environmental groups.

January 13, 2004
Council directed the City Manager to conduct a study to evaluate options for increasing the beneficial use of the City's recycled water (Resolution R-298781).

July 20, 2005
The NR&C heard a presentation on the status of the Study including public outreach activities and the outcome of the Assembly workshops.

August 15, 2005
The PUAC heard a presentation on the Study, adopted a motion to accept the Study Interim Report, and referred the report to the Public Education Committee for technical review.

November 4, 2005
The PUAC Public Education Committee met to discuss the Study and approved four recommendations on the Study at the November PUAC meeting.

November 21, 2005
The PUAC adopts a resolution in support of the Study based upon the Assembly Workshop II Statement.

COMMUNITY PARTICIPATION AND PUBLIC OUTREACH EFFORTS:
Public outreach and public involvement efforts are summarized in the SUMMARY section. Details on all activities are available. **See Attachment 2**

Declared Supporters
Letters of Support: The City has received letters of support from local community groups, business associations, and other cities, many of which would be impacted by the implementation of the six reuse strategies. Letters received to date:

BIOCOM
Biosite Incorporated
Carmel Mountain Ranch Community Council
Chollas View Neighborhood Council
City of Coronado
City of Del Mar
City of El Cajon
City of Imperial Beach
City of La Mesa
City of National City
City of Poway

Del Mar Mesa Community Planning Board
Greater Skyline Hills Community Association
Metro Wastewater Joint Powers Authority
Padre Dam Municipal Water District
Ramona Municipal Water District
San Diego Audubon Society
San Diego Coastkeeper
San Dieguito Water District
San Diego Regional Chamber of Commerce
Sweetwater Authority
Torrey Hills Community Planning Board
University City Mens Club

Stakeholder group opinions: The 67-member City of San Diego Assembly on Water Reuse has supported all options to increase the use of recycled water, and their Assembly Workshop II Statement affirmed unanimous support for indirect potable reuse, specifically **NC-3.**

Informal opinion surveys: An informal online opinion survey was linked to the Study website when the site was launched August 5, 2004. Paper copies of the survey were distributed at speaking engagements and surveys received were added to the website survey statistics. As of February 28, 2006, there were 404 surveys completed. Respondents were given the option of indicating residency and 88% provided a zip code. 292 of the total respondents provided a zip code within the City of San Diego, which is 72% of total respondents. Of 292 respondents indicating a San Diego zip code, 176 or 60% answered "yes" to the question "Do you favor using advanced treated recycled water as a drinking water source?" and 116 or 40% answered "no." These percentages closely match the overall total results to this question: 59% "yes", 41% "no."

Known Opposition

Known opposition has been documented from the Revolting Grandmas, former Councilmember Bruce Henderson, Stephen Bilson, Chairman and CEO of ReWater Systems, Inc., a gray water systems vendor, and Association of Concerned Taxpayers, which filed a lawsuit against the City challenging the Study as it relates to reservoir augmentation.

KEY STAKEHOLDERS AND PROJECTED IMPACTS:

The Study team has sought to identify and offer presentations to key community stakeholders. The impact on various groups and citizens of San Diego varies with each water reuse strategy. For the recycled water non-potable use strategies (**NC-1, SB-1**) existing customers currently receiving potable water for irrigation and industrial uses, once connected to the recycled water system, will benefit from the lower cost of recycled water, compared to potable water. New customers connected to the system will also benefit from the lower cost of recycled water.

For the recycled water strategies that could utilize created wetlands (all strategies except **SB-1**) the potential environmental benefits include: natural treatment, recreational opportunities, aesthetic enhancements to surrounding communities, water quality improvements (e.g. lower salt content, dilution of urban runoff) and restoration of historic wetlands.

For the recycled water strategies utilizing indirect potable reuse via reservoir augmentation projects (**NC-2, NC-3, SB-2, SB-3**), the extent of San Diego citizens who would benefit varies according to their location within the geographic service area of each City drinking water plant.

The City's three water treatment plants, Miramar, Alvarado and Otay, would each receive source waters that contain a blend of advanced treated recycled water from a storage reservoir

Implementation of any of the strategies will increase the use of recycled water and create a locally controlled, reliable source of supply that will reduce the region's dependency upon imported water.

_____	_____
J. M. Barrett	R. F. Haas
Water Department Director	Deputy Chief of Public Works

Attachments:

Attachment 1 – Water Reuse Study Final Draft Report (not available on the Web)
Attachment 2 – Public Involvement Activities (not available on the Web)
Attachment 3 – Summary of Reuse Strategies (not available on the Web)

Note: Due to the size of the document (and attachments) a limited distribution was made. Copies are available in the offices of the City Clerk located at 202 C Street, 2nd floor, and Water Department's Water Policy and Strategic Planning Division, located at 600 "B" Street, Ste 600, San Diego, Ca. 92101.