Agenda Item #13.1
For Council Meeting of: July 30, 2013

CITY OF SANTA ROSA
CITY COUNCIL

TO:	MAYOR AND CITY COUNCIL
SUBJECT:	WHOLESALE RECYCLED WATER RATE FOR INTERRUPTIBLE SERVICE AND DECREASE IN THE WHOLESALE RECYCLED WATER RATE FOR NON-INTERRUPTIBLE SERVICE
STAFF PRESENTER:	JENNIFER BURKE, DEPUTY DIRECTOR ENVIRONMENTAL SERVICES UTILITIES DEPARTMENT
AGENDA ACTION:	PUBLIC HEARING

ISSUE(S)

Should the City Council adopt a wholesale recycled water rate for interruptible service and amend the existing wholesale recycled water rate to decrease the wholesale recycled water rate for non-interruptible service?

BACKGROUND

1. The Santa Rosa Subregional Water Reclamation System (Subregional System) provides tertiary treated recycled water to agricultural and urban irrigation users. The Subregional System provides recycled water directly to agricultural users and end users in Rohnert Park through provisions of individual contracts. The Subregional System wholesales recycled water to the Santa Rosa water utility, which serves the Santa Rosa Urban Reuse System.

2. In June 2008, the Santa Rosa City Council adopted Resolution No. 27152, setting the wholesale recycled water rate for the Santa Rosa Urban Reuse Project at $225 per acre-foot in 2008 dollars and adjusted annually consistent with the percent changes in Sonoma County Water Agency's wholesale water rate applicable to the City of Santa Rosa, based on analysis presented in the *Santa Rosa Urban Reuse Project: Institutional and Economic Analysis of Urban Reuse Operations* dated January 20, 2008 (attached). Since the wholesale recycled water rate was set in 2008, the Sonoma County Water Agency has raised rates as follows:

Date	Percentage Increase in SCWA Wholesale Rate
7/1/2009	19.9%
7/1/2010	6.93%

7/1/2011	5.0%
7/1/2012	5.98%
7/1/2013	4.95%

3. As of July 1, 2013, the current wholesale recycled water rate is $336.90 per acre-foot.

4. On July 18, 2013, the Board of Public Utilities adopted the "Santa Rosa Subregional System 2013 Recycled Water Pricing Policy" (attached) recommending changes to the wholesale recycled water rate.

ANALYSIS

1. Discussions have begun with the City of Rohnert Park to evaluate a wholesale-retail relationship between the Subregional System and the City of Rohnert Park based on the existing model that was created between the Subregional System and the Santa Rosa Water Utility.

2. During this evaluation, the current wholesale recycled water rate was reviewed. Some of the existing urban recycled water customers store recycled water on their property site and use the stored recycled water to pressurize their irrigation system. As such, these sites can have their service interrupted at any time and provide flexibility to the Subregional System. In recognition of this flexibility, it is recommended that a wholesale recycled water rate for interruptible service be established by the Santa Rosa City Council at $130 per acre-foot in 2013 dollars. The recommended rate is based on the cost of the sites' alternative source of water supply.

3. Sonoma County Water Agency wholesale water rates have increased at a significantly greater rate than the annual percentage changes in the Consumer Price Index-Urban (CPI-U) for the San Francisco-Oakland-San Jose, California area. Upon review, adjusting the wholesale recycled water rate consistent with percentage changes in the CPI-U for the San Francisco-Oakland-San Jose, California area is more consistent with changes in costs to wholesale recycled water. Since 2008, the CPI-U for the San Francisco-Oakland-San Jose, California area has changed as follows:

Date	**% Annual Change CPI-U**
1/1/2010	0.70%
1/1/2011	1.4%
1/1/2012	2.6%
1/1/2013	2.7%

Adjusting the wholesale recycled water rate annually by CPI-U would have resulted in a rate of $242. It is recommended that the Santa Rosa City Council amend the existing wholesale recycled water rate to decrease the wholesale recycled water rate for non-interruptible service and that rate be set by Santa Rosa City Council at $242 per acre-foot in 2013 dollars, adjusted annually consistent with the percent changes in CPI-U for the San Francisco-Oakland-San Jose, California area.

4. On July 11, 2013, the Subregional Technical Advisory Committee reviewed the "Santa Rosa Subregional System 2013 Recycled Water Pricing Policy" and recommended approval of the Policy and the changes to the wholesale recycled water rate.

5. The Board of Public Utilities recommends that the Council establish a wholesale recycled water rate for interruptible service at $130 per acre-foot in 2013 dollars and change the wholesale recycled water rate for non-interruptible service to $242 per acre-foot in 2013 dollars, adjusted annually consistent with the percent changes in CPI-U for the San Francisco-Oakland-San Jose, California area.

RECOMMENDATION

It is recommended by the Board of Public Utilities and the Utilities Department that the City Council, by resolution, adopt a wholesale recycled water rate for interruptible service and decrease the existing wholesale recycled water rate for non-interruptible service.

Author: Jennifer Burke

Attachments:

- *Subregional System 2013 Recycled Water Pricing Policy*
- *Santa Rosa Urban Reuse Project: Institutional and Economic Analysis of Urban Reuse Operations* dated January 20, 2008

Santa Rosa Subregional System 2013 – Amendment 07/2013
RECYCLED WATER PRICING POLICY

INTRODUCTION

A pricing policy for the Santa Rosa Subregional Water Reclamation System (Subregional System) was established in the early 1990's which included recycled water policies and pricing structures designed to maximize disposal. In December 2008, the Pricing Policy was revised to recognize the value that recycled water provides as a water supply resource, and a new Recycled Water Pricing Policy was adopted, which included policy guidelines and pricing structures that reflect the water supply value as well as the disposal value. Continuing to recognize the water supply and disposal value of recycled water, the Recycled Water Pricing Policy is being updated in 2013 to recognize the flexibility that interruptible recycled water service provides to the Subregional System as well as to index the wholesale recycled water rate for non-interruptible service to an index that more accurately reflects the wholesale costs of recycled water.

A. POLICY ELEMENTS RELATED TO ALL RECYCLED WATER USE

1. The Subregional System benefits from the recycled water disposal capacity that urban and agricultural use provides. Recycled water has also become an important source for regional water supply, and communities benefit from adding recycled water to their water supply mix, thereby reducing the dependence on potable water for the many uses which recycled water can serve, and diversifying their water supply sources.

2. The Subregional System can provide recycled water that is more reliable than potable water because it can be available even under conditions that cause potable water to be limited (e.g., weather or regulatory water shortage).

3. Santa Rosa currently has numerous contracts with end users of recycled water in the urban areas and in agriculture. Upon expiration or termination, where contracts are renegotiated, new contract provisions should be added to reflect this policy document.

4. Recycled water pricing has historically had the goal of encouraging reuse and meeting regulatory compliance for disposal. Recycled water has now become a valuable resource and the rates charged for the use of recycled water, both wholesale and retail, should reflect its value as a reliable and sustainable water resource.

B. POLICY ELEMENTS SPECIFIC TO URBAN REUSE – NON-INTERRUPTIBLE SERVICE

1. Policies related to use of recycled water in the urban sector should be developed and carried out by the city or utility that provides retail water service. These policies include but are not limited to whether use will be mandatory or voluntary, which users will be eligible to use recycled water, and discretionary design standards for end-use facilities (such as landscape turf limits).

2. Previous pricing policy in the urban sector had allowed Subregional System members the use of recycled water at no cost. In the early 1990's when recycled water disposal was the sole driver for urban reuse, this policy was appropriate. In 2008, with regional water resources increasingly relying on the use of recycled water to meet future water needs, the Subregional Pricing Policy was changed to reflect the water supply and disposal value of recycled water. Non-interruptible supply provides both of these benefits and pricing should continue to reflect this.

C. POLICY ELEMENTS SPECIFIC TO AGRICULTURAL AND URBAN REUSE – INTERRUPTIBLE SERVICE

1. Subregional System operation requires flexibility to respond to weather conditions and operational variables. Supply that can be interrupted in response to variables provides the Subregional System with the benefit of operational flexibility. Pricing interruptible supply to reflect the benefit to the Subregional System is reasonable.

2. Rates charged for water should take into consideration the relative reliability of the water supply, the time of year it is provided to the end user, and other site-specific factors which may affect the impact on the Subregional System to provide the water under the conditions agreed to by the City of Santa Rosa and the end user.

D. RATE STRUCTURES

1. Urban Use

The Subregional System currently serves urban recycled water customers in the cities of Santa Rosa and Rohnert Park, with the rates set by individual contracts or operating agreements with each end user. Both cities have completed feasibility studies on expanding the use of recycled water in their communities, and all or part of these expansions will likely be built over the next decade. The Cities of Cotati and Sebastopol, and other regional agencies may also seek to use recycled water from the Subregional System in the future.

- <u>Existing and Future Santa Rosa Urban Reuse Project – Non-Interruptible Service</u>
  The Subregional System will sell recycled water to the City of Santa Rosa water utility for the Santa Rosa Urban Reuse Project on a wholesale basis. The City of Santa Rosa will set retail rates and establish all end user policies. The Subregional System will continue to provide service to the end users within the City of Santa Rosa Urban Growth Boundary for all current contracts and operating agreements until those agreements expire or are otherwise terminated, at which time the Santa Rosa water utility will provide recycled water service under the conditions of this Policy and Santa Rosa City Code.

  Wholesale Recycled Water Rate for Santa Rosa Urban Reuse Project-Non-Interruptible Service: The wholesale recycled water rate for non-interruptible service for the Santa Rosa Urban Reuse Project was set by Santa Rosa City Council at $225 per acre foot in 2008 dollars, adjusted annually consistent with the percent

changes in Sonoma County Water Agency's wholesale water rate applicable to the City of Santa Rosa. Sonoma County Water Agency wholesale water rates have increased at a significantly greater rate than the costs to wholesale recycled water. Upon review, adjusting the wholesale recycled water rate consistent with percentage changes in the Consumer Price Index-Urban (CPI-U) for the San Francisco-Oakland-San Jose, California area is a better index. Since 2008, adjusting the wholesale recycled water rate annually by CPI-U would have resulted in a rate of $242. It is recommended that the wholesale recycled water rate be set by Santa Rosa City Council at $242 in 2013 dollars, adjusted annually consistent with the percent changes in CPI-U for the San Francisco-Oakland-San Jose, California area. This wholesale rate provides greater revenue and lower net operating costs to the Subregional System; and provides recycled water to the Santa Rosa water utility at a rate that allows for adequate revenue from retail sales to cover the cost of operating the recycled water distribution system.

- Existing and Future Rohnert Park Urban Reuse Project – Non-Interruptible Service
  The Subregional System will continue to provide recycled water service directly to the end users in Rohnert Park until March 28, 2015. Some of the existing users have potable water from the City of Rohnert Park as the alternate source of supply (if recycled water were not available), and others have private wells as the alternate source of supply.

  Until March 28, 2015, when current contracts expire or are otherwise terminated, new contracts will be negotiated with the goal of the end user paying 95% of the cost of their alternate source of supply with the potential for a phase-in period which would result in the end user reaching 95% of the cost of their alternate supply not later than the end of 2013. In no case should the end user pay less than the rate in their current contract during the phase-in period. If the alternate source of supply is potable water from the City of Rohnert Park, the end user should also pay fixed charges by meter size at the rate of 90% of the City of Rohnert Park potable water fixed charges.

  On or after March 29, 2015, and if the Subregional System sells recycled water to the City of Rohnert Park for the Rohnert Park Urban Reuse Project on a wholesale basis, the City of Rohnert Park will set retail rates and establish all end user policies consistent with a Wholesaler/Retailer Agreement for Supply of Recycled Water Between the City of Santa Rosa and the City of Rohnert Park.

  Wholesale Recycled Water Rate for Rohnert Park Urban Reuse Project- Non-Interruptible Supply: It is recommended that the wholesale recycled water rate for non-interruptible service for the Rohnert Park Urban Reuse Project be set by Santa Rosa City Council at $242 per acre foot in 2013 dollars, adjusted annually consistent with the Consumer Price Index-Urban (CPI-U) for the San Francisco-Oakland-San Jose, California area. This wholesale rate provides greater revenue and lower net operating costs to the Subregional System; and provides recycled water to the City of Rohnert Park at a rate that allows for adequate revenue from retail sales to cover the cost of operating the recycled water distribution system

- Existing and Future Urban Reuse Projects - Interruptible Wholesale Supply
  Wholesale Recycled Water Rate for Urban Reuse Projects- Interruptible Service: Some of the existing users store recycled water on their property site and use the stored recycled water to pressurize their irrigation system. As such, these sites can have their service interrupted at any time and provide flexibility to the Subregional System. In recognition of this flexibility, it is recommended that the wholesale recycled water rate for interruptible service for the Santa Rosa and Rohnert Park Urban Reuse Project be set by Santa Rosa City Council at $130 per acre foot in 2013 dollars.

- Other Future Urban Reuse Projects
  The Cities of Rohnert Park, Cotati and Sebastopol, as Subregional System agencies, are eligible to direct a portion of the recycled water that is land applied to their service areas for urban reuse. Regionally, other cities or special districts may also be interested in Subregional System recycled water for urban application.

  The approach to rate setting for urban reuse for other agencies will be guided by the Policy Elements of sections A, B and C of this Policy, and will consider the specific interests of the agency and the Subregional System as well as market conditions for water and Subregional System costs of recycled water operations at such time as a project is identified. Flexibility exists to tailor the specific approach to the needs and interest of the parties involved.

  A number of factors may influence the choice of institutional structure for future urban reuse projects, which in turn will influence rates and rate structures. Operation of a retail urban recycled water systems by the Subregional System may most effectively meets all parties' needs; or a wholesale/retail model may be most appropriate; or a hybrid of these approaches may be most effective.

2. Agricultural Use

The Subregional System will continue to provide recycled water to agricultural users under individual contracts. When current contracts expire or are otherwise terminated, any new contracts will be in accordance with the provisions of Sections A and C of this Policy. Water rates will continue to be determined by contract for agricultural recycled water delivery from the Subregional System. Rates will be designed to reflect the market conditions for water and the degree to which the use provides flexibility to the Subregional System, in accordance with this Policy.

CITY OF SANTA ROSA

Santa Rosa Urban Reuse Project: Institutional and Economic Analysis of Urban Reuse Operations

January 30, 2008

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I. SUMMARY

As the City of Santa Rosa (City) moves forward with plans for implementing the Santa Rosa Urban Reuse Project (SRURP), attention is turning to the operational aspects of the project. The SRURP represents a major expansion of urban reuse. Current urban reuse within Santa Rosa and Rohnert Park include about 50 customers. The proposed SRURP is expected to ultimately serve more than 1,100 customers and provide about 1,000 million gallons (MG) of recycled water within the City.

This report examines issues associated with the operation of the SRURP. It summarizes some of the recent decisions made regarding urban reuse (e.g., recycled water pricing policies) and presents the rationale for proposed operational structure, economics of reuse operations, and other related issues. While this report focuses on the SRURP, additional urban reuse is also being considered in Rohnert Park and Cotati, and may be considered in Sebastopol in the future. This report identifies issues related to urban reuse operations within the jurisdictions of User Agencies. The approach to urban reuse operations within User Agency jurisdictions may differ from the approach proposed for Santa Rosa.

Institutional and Operational Framework

When the City began to consider incorporating operation of the SRURP into the Utilities Department's existing organization and operation, three different frameworks were identified and evaluated. These included:

- *Subregional System (status quo)* – Currently the Subregional System operates the entire urban reuse system and is the service provider to end users. The City's water utility is not involved.
- *Separate recycled water enterprise* – The SRURP could be set up as a separate enterprise within the City's Utilities Department, with costs and revenues segregated from other utility operations.
- *Wholesale/retail* – The Subregional System could provide recycled water to the City's water utility on a wholesale basis with the water utility operating the recycled water distribution system and being the service provider to end users.

The three institutional and operational frameworks were conceptually discussed in interviews with a number of managers within the Utilities Department. The wholesale/retail framework quickly surfaced as the preferred approach for a variety of reasons. Establishing a new enterprise within the Utilities Department was the least preferred of the three options considered.

Primary benefits of the wholesale/retail framework are:

- The ability to distinguish between water and Subregional issues, and the structure to consider each on their own merits

- The operational requirements of the recycled water distribution system are very similar to the water distribution system.

Other benefits of the wholesale/retail framework include:

- A stronger nexus for justifying recycled water rates and recycled water demand fees
- The SRURP will be viewed in the community as an integral element of the water supply and water resource management strategy (the status quo emphasizes wastewater disposal)
- Subregional System maintains primary focus on wastewater treatment and disposal while the wholesale water rate serves as a means of cost coverage.

Section II of this report provides additional information on the institutional and operational frameworks consider.

Economics of Reuse Operations

Once fully implemented, the SRURP is expected to cover the operating and maintenance costs of reuse operations through revenues received from the sale of recycled water. Under the wholesale/retail framework, recycled water sales revenue will be revenue to the City's water utility. Subregional System costs of reuse operations will be covered through the wholesale water rate charged to the water utility for wholesale water deliveries. The purchase of recycled water will be one of the operating costs of the water utility, similar to water purchases from the Sonoma County Water Agency (SCWA).

The City of Santa Rosa recently adopted new recycled water pricing policies that set the retail rate for recycled water at a slight discount to potable water rates. The adopted recycled water rates are to be implemented in the fall of 2008. Based on these rates, recycled water sales revenue is estimated at about $1,300 per AF (comprised of both service charges and tiered commodity rates).

Preliminary estimates of the wholesale and retail costs of SRURP operations have been developed. Cost estimates should be refined as the project proceeds through detailed design and initial phases of the project are implemented. At full implementation, the cost of SRURP retail operations, including recycled water purchases, is expected to be between $1,000 and $1,300 per AF (in current dollars). Therefore, from an operational standpoint, once the SRURP is fully implemented revenue from recycled water operations is expected to equal or slightly exceed the operating and maintenance costs of recycled water operations. Embedded in the range of retail recycled water operating costs are assumptions for a range of potential recycled water purchase costs (i.e., the wholesale water rate).

Preliminary estimates of the wholesale (Subregional) cost of SRURP operations suggest a range from $200 to $250 per AF. Furthermore, analyses have converged on a proposed SRURP wholesale rate of $225 per AF. At this rate, recycled water will be attractive to the water utility (i.e., retail revenue should cover retail operating costs). A wholesale rate of $225 per AF also provides reasonable compensation to the Subregional System for the estimated operating and

maintenance cost of wholesale recycled water delivery. In addition, at $225 per AF the SRURP will be an attractive means of recycled water disposal, relative to most other disposal options, for the Subregional System.

Details of the preliminary economic analysis of SRURP operations and the SRURP wholesale rate recommendation are presented in Section III of this report.

Future Urban Reuse Projects for User Agencies

While the wholesale/retail framework is the preferred approach for the SRURP, it may not be the preferred approach for future urban reuse projects within the jurisdictions of User Agencies. Public works managers from Rohnert Park, Cotati, and Sebastopol have each indicated that staff and resource limitations within their cities may make operation and maintenance of recycled water distributions systems within their jurisdictions undesirable. Santa Rosa Utilities management has indicated that the approach to urban reuse in each User Agency jurisdiction would consider the specific needs and interests of each agency.

Section IV of this report summarizes some of the issues identified related to future urban reuse projects within User Agency jurisdictions.

II. INSTITUTIONAL AND OPERATIONAL FRAMEWORK

The Subregional System currently provides tertiary treated recycled water directly to about 50 urban irrigation users in Santa Rosa and Rohnert Park under individual contracts, with most connections initiated in the early 1990s when disposal was the sole driver for urban reuse. Santa Rosa, Rohnert Park, and Cotati are in the process of evaluating expanding the role of recycled water as part of their community's water supply mix. This expansion could serve more than 1,200 additional users in the three cities combined.

The City of Santa Rosa recently evaluated the current institutional and operational structure of the Subregional System operating as the direct provider of recycled water to end users, as well as alternatives that may be more suitable in the future as recycled water is increasingly valued as a water resource. The evaluation was conducted because the pending SRURP will require a much more extensive water distribution system within City limits, may ultimately serve more than 80 times as many customers as the existing Santa Rosa urban reuse system, and is only feasible when constructed to meet the combined needs of both wastewater disposal and water supply.

Frameworks Evaluated

To determine the most effective and efficient way to incorporate expanded urban reuse into the City's utility operations, three options were evaluated to share responsibilities, facilities, costs, and revenues for the operation of the SRURP once it is built. The three institutional and operational frameworks that were evaluated are:

- ***Subregional System as Recycled Water Service Provider*** – This is essentially the framework currently used to provide recycled water to urban customers in Santa Rosa and Rohnert Park. Under this framework, the Subregional System would continue to be the service provider to all urban recycled water customers, including the SRURP. The Subregional System would bear all operating and maintenance costs of the project and receive all revenues associated with the sale of recycled water. While the water utility would contribute to the capital cost of the project, the water utility would not be involved in recycled water operations.
- ***Separate Recycled Water Enterprise*** – Under this approach, a separate enterprise (within the Utilities Department) would be established to be the provider of recycled water service. Under this framework, the recycled water enterprise would acquire recycled water from the Subregional System and distribute the water to customers. The recycled water enterprise would be responsible for operating and maintaining the recycled water system in urban areas. It would receive the revenues from recycled water sales and would purchase recycled water from the Subregional System. The City's water utility would not be directly involved in recycled water utility operations.
- ***Wholesale/Retail Framework*** – Under this approach, the Subregional System would provide recycled water on a wholesale basis to the City's water utility for distribution to

recycled water customers. The City's water utility would be responsible for operation and maintenance of the recycled water distribution system and be the service provider to end users. The water utility would receive the revenue from recycled water sales, but would also purchase recycled water on a wholesale basis from the Subregional System.

To help evaluate each of the three frameworks identified, interviews were conducted with managers within the City's Utilities Department. Interviews were conducted with:

- Miles Ferris – Director of Utilities
- Glen Wright – Deputy Director of Water Resources
- Dan Carlson – Deputy Director of Utility Operations
- Mark Powell – Deputy Director of Local Operations
- Linda Reed – Administrative Services Officer-Budget
- Jennifer Burke – Senior Water Resources Planner
- Randy Piazza – Reclamation Superintendent
- Rick Santarini – Local Construction Superintendent
- Jim Montenegro – Local Operations Superintendent

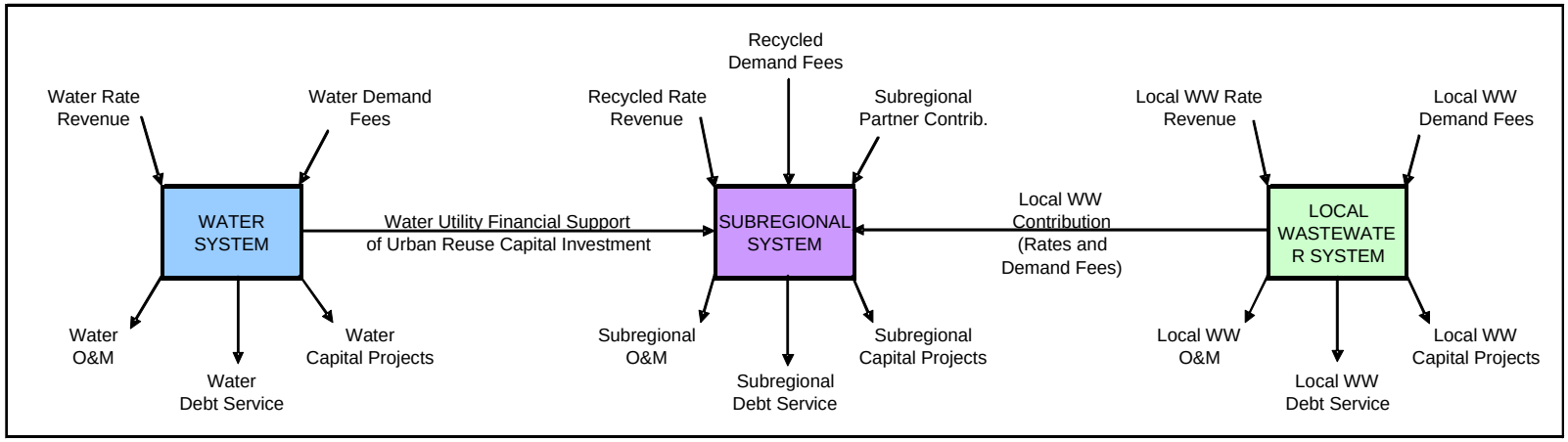
Exhibits 1, 2, and 3 present schematic diagrams used to illustrate the general concepts associated with each of the three institutional and operational frameworks during interviews. These diagrams are not definitive, but illustrate and identify various issues, implications, and relationships associated with each general framework.

The evaluation of each framework included assessing the institutional, management, operational, financial (accounting), economic (cost sharing), policy, and public perception issues associated with operation under each alternative.

The City's Utilities Department currently operates the water utility, the local wastewater utility, and the Subregional System. Each of the three utilities is operated as a separate enterprise and costs of operations are either directly borne by the utilities or indirectly allocated to the utilities. At present, urban reuse operations are an integral part of Subregional System operations. Under the proposed frameworks, future urban reuse operations would either continue to be entirely a Subregional operation, become a separate (fourth) enterprise, or be divided between the Subregional System and water utility.

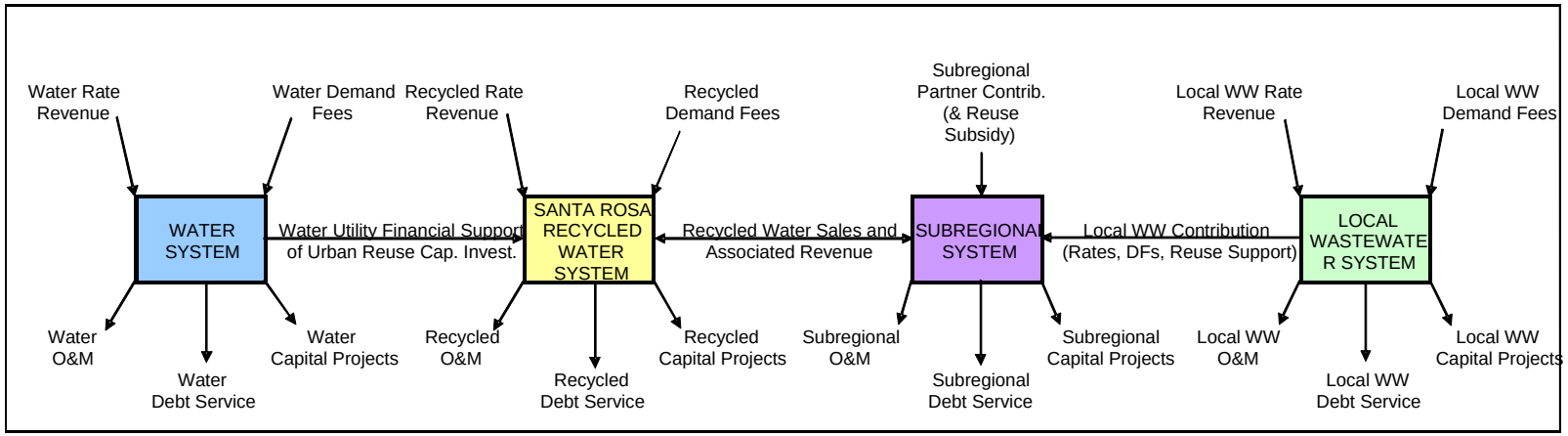
Nearly all managers interviewed regarding the institutional and operational framework for the SRURP gravitated to the wholesale/retail framework as a preferred approach. While each framework has some advantages over the others, the wholesale/retail framework appears to have the most advantages and fewest disadvantages.

Exhibit 1
City of Santa Rosa -- Utilities Department
Current Framework for Subregional System and the Santa Rosa Urban Reuse Project



Subregional System
Supply/Treatment
Transmission
Seasonal Storage
Post Storage Treatment
Distribution
Distribution Storage
Customer Relations
Planning/Development

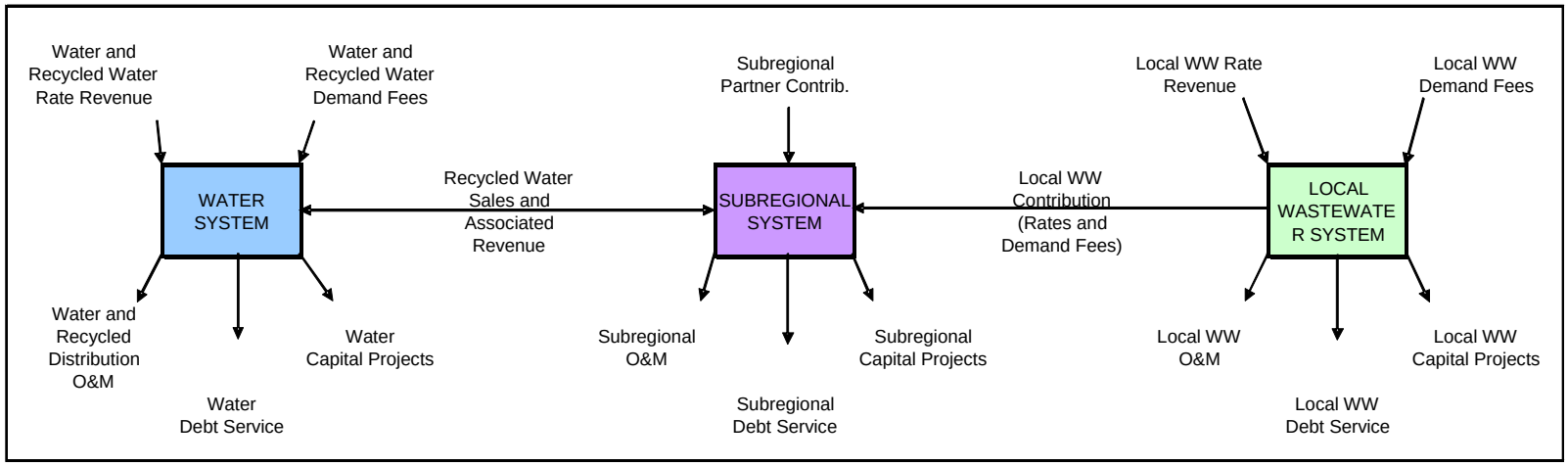
Exhibit 2
City of Santa Rosa -- Utilities Department
Recycled Water Enterprise for the Santa Rosa Urban Reuse Project



Recycled Water Enterprise
Transmission
Distribution
Distribution Storage
Customer Relations

Subregional System
Supply/Treatment
Transmission
Seasonal Storage
Post Storage Treatment
Planning/Development

Exhibit 3
City of Santa Rosa -- Utilities Department
Wholesaler/Retailer Framework for Subregional System and the Santa Rosa Urban Reuse Project



Local Retail
Distribution
Distribution Storage
Customer Relations
Planning/Development

Subregional Wholesale
Supply/Treatment
Transmission
Seasonal Storage
Post Storage Treatment
Planning/Development

Comparison of the relative advantages and disadvantages of each of the three frameworks is carried out in the following sections which examine key operational issues individually.

Institutional Considerations

While the City Council, Board of Public Utilities, and City and Utilities management teams all preside over all three utilities of the Utilities Department, at times it is important that the needs and interests of each utility are considered independently from the needs and interests of the others. Under the current framework, the Subregional System would become increasingly involved in water policy decisions that may be more appropriately addressed by the water utility. The City's interests as well as the interests of User Agencies will be better served if water supply and wastewater disposal issues are each addressed from the perspective of independent utilities.

Creating a recycled water enterprise might be worthwhile if it were important to demonstrate that the recycled water utility would be independent and self-sufficient from the other utilities. However, because (from the capital investment perspective) the SRURP meets important wastewater disposal and water supply objectives, independence is not a significant consideration.

Management Considerations

All three existing utility enterprises are organized and managed within the Utilities Department. A new (recycled water) enterprise can be created within the department. This would entail establishing new operating and capital funds and mirroring existing financial account and budget structures for a new enterprise. Doing so would create new administrative costs and management burdens that could be avoided under the other two frameworks considered. Therefore, the recycled water enterprise framework has some cost and administrative disadvantages over the other options.

The Utilities Department has effectively organized its staff and operations to address the specific needs of each of the three existing utilities. Staffing and deployment of resources for local water overlaps considerably with those of local wastewater operations, which largely takes place within the City's boundaries. Subregional System operations, in contrast, are more separate (both physically and organizationally) with Subregional operations focused around the Laguna Treatment Plant and related disposal system facilities.

From a management and resource deployment perspective, the operation of the SRURP recycled water distribution system will be more aligned with water distribution operations than Subregional operations. The wholesale/retail framework takes advantage of the current organizational and operational resources. Under this framework, recycled water distribution operations would be an extension of water distribution operations.

Operational Considerations

Specific aspects of recycled water distribution operations closely parallel that of water distribution operations. Specific operating tasks and activities such as customer service, utility billing, meter reading, meter maintenance, valve exercising, facilities maintenance and repair, pipeline maintenance and repair, USA mark outs, water conservation, water quality monitoring, new service planning, pipeline construction, and other tasks are all nearly identical between water and recycled water systems. The regulatory compliance aspect of recycled water operations will be the one new and distinct responsibility of the water utility regarding the recycled water system.

Subregional reclamation operations have been focused on operation of the existing agricultural and urban reuse transmission system. Most of this operation lies outside of the City limits and involves a limited number of recycled water service connections. Limiting reclamation operations to the operation of the Subregional recycled water transmission and disposal system is considered more efficient than extending the operation into a new recycled water distribution system intertwined with the potable water system and located throughout the City.

Financial (accounting) Considerations

The City's accounting system currently separately tracks and accounts for the costs and revenues of each of the City's three utilities. Many costs are directly borne by each utility while others are indirectly allocated to the utilities on various appropriate bases. The costs of recycled water operations could be accounted for in whatever operational framework is chosen. For example, if the current framework were selected, but local water utility staff and resources were designated to operate the recycled water distribution system, the City could still capture the costs of this operation as a Subregional cost. However, doing this would add to the accounting and administrative complexity. In other words, under the existing framework, an efficient operating structure (with water utility staff operating the recycled water distribution system) would add administrative costs. The wholesale/retail framework would take advantage of the more efficient operating structure and avoid the need to separately track recycled water distribution operating costs from water utility costs.

Economic (cost sharing) Considerations

The SRURP will provide both wastewater disposal and water supply benefits. The capital investment required to construct the SRURP will be divided between the Subregional System and the water utility based on the cost of other disposal and water supply alternatives and the relative benefits received. Operation and maintenance costs of the SRURP are expected to be fully covered by the recycled water sales revenue (see Section III of this report). However, costs and revenues must be shared (allocated) between the water utility and Subregional System.

Under the current framework, all operating costs and all recycled water revenues would accrue to the Subregional System. The water utility's participation in the project would be limited to the capital investment required to construct facilities. It should be recognized that the water utility would, in effect, lose customers to the Subregional System (i.e., the current framework

might ultimately put the Subregional System at odds with the water utility). Under the wholesale/retail framework the water utility would receive the revenue from recycled water sales and be responsible for the costs of recycled water operations. Recycled water operating costs would include the cost of purchasing recycled water from the Subregional System. The wholesale water rate would serve as the mechanism for ensuring that the Subregional System is "made whole" through the wholesale sale of recycled water.

Recycled water rates and demand fees recently adopted by the City of Santa Rosa are consistent with the wholesale/retail framework. The cost of service nexus justifying the rates and demand fees follow a "water is water" perspective in which water rates and demand fees are essentially the same for potable water and recycled water customers[1]. Subregional System pricing practices for agricultural reuse and urban reuse in Rohnert Park and Santa Rosa have historically been based on the need to dispose of the water, and not on the cost of providing the water. The implementation of the SRURP reflects a change in policy and in perspective, in which recycled water is one of the City's resources to be used to meet the community's water resource needs.

Policy Considerations

The City's recently adopted Recycled Water Ordinance (September 2007) includes the requirement for recycled water use, when available and appropriate, for new development. The SRURP includes voluntary conversion of existing potable water uses to recycled water. These policies are consistent with both wastewater disposal and water supply objectives.

The wholesale/retail framework aligns with the City's policy objectives more than the other options considered because water needs and interests can be separately addressed from Subregional needs and interests. Maintaining the status quo could result in water policy decisions (those related to recycled water) being guided by Subregional considerations. From a policy perspective, the City's water resource needs should be addressed from the City's perspective, rather than the more complex dynamics of the Subregional System with multiple agency interests.

Public Perception Considerations

The success of the SRURP (particularly potable water offset conversions) may be tied to how the community reacts to the project. The SRURP has approached recycled water as an important component of the City's water supply and water resource management strategy rather than only a disposal project. For this reason, it is advantageous that the public image of the SRURP is primarily from the water perspective. The wholesale/retail framework is more consistent with the water resource message the City wants to foster regarding the SRURP.

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[1] As described in Section III, recycled water rates are slightly discounted from potable water rates to reflect the increased customer costs associated with use and management of recycled water.

Exhibit 4 summarizes each of the three institutional and operational frameworks considered for the SRURP. The wholesale/retail framework is the preferred approach. As the City proceeds with the implementation of initial phases of the SRURP, operating and organization decisions will be made consistent with this framework.

Section IV of this report identifies issues related to future urban reuse within the jurisdictions of User Agencies. The wholesale/retail framework may not be the preferred approach to urban reuse for the User Agencies.

Exhibit 4
City of Santa Rosa – Utilities Department
Comparison of Institutional and Operational Frameworks for the Santa Rosa Urban Reuse Project

	Current Framework	Recycled Water Enterprise	Wholesale/Retail
Description	Subregional System acts as recycled water service provider to urban customers	Separate new enterprise created in Utilities Department for providing recycled water to urban customers	Subregional System provides recycled water wholesale to water utility for retail distribution to urban customers
Facilities and Ownership	Subregional System	Recycled water utility	Subregional System: Wholesale transmission, pumping, storage, and post-storage treatment facilities; Water utility: Distribution system facilities, including distribution storage and connections to end users
Policy Considerations	Subregional System as water service provider (gets into water policy/politics)	Legal organization, start-up, self-sufficiency; Requires coordination w/ both Subregional System and water utility	Policies for retail recycled water marketing align with water utility, including rate setting, requirement to use recycled water, land use decisions, etc.
Financial Considerations	Weaker nexus for rates and participation fees	New utility would be dependent on Subregional System and water utility for financial support, i.e., uncertain independent financial capacity	Shared financial responsibility – wholesale recycled water rate provides convenient mechanism for cost recovery and equity
Benefits	Status quo	Provides greater transparency on economics of urban reuse	Stronger nexus for rates and demand fees; Operational efficiency; Local control on water issues; Better from perspective of all water users (all water service should be provided by the water utility)
Challenges	Basis for water utility participation uncertain; Operational redundancy; Subregional System has limited distribution system operational experience	New accounting and budgeting structure adds costs; Uncertain independent financial capacity; Operational redundancy	Requires restructure from status quo; User Agencies have varied end-user needs

III. ECONOMICS OF URBAN REUSE OPERATIONS

This section examines the economics of operations of the SRURP. Operating costs of the SRURP have been roughly estimated for illustrative purposes, and are used here to illustrate a method that can be used to derive wholesale rates. Further development of operating and maintenance cost estimates will occur as the project is designed and implemented. Estimates of recycled water revenues are based on the City's recently adopted policies for recycled water pricing. These policies call for recycled water to be priced at a slight discount to potable water rates. The discount is intended to offset the added customer costs associated with managing recycled water systems.

The analysis presented herein is based on the wholesale/retail framework proposed in the previous section. City staff has embraced this approach as the most appropriate for the SRURP. The phased implementation of the SRURP has been proposed in a Technical Memorandum prepared by Winzler & Kelly[2]. The memorandum outlines the estimated cost to construct the SRURP, with emphasis on initial phases in both the West and South areas. Analyses presented herein assume that the entire 1,000 MG SRURP would be implemented.

Subregional (Wholesale) Operations

The Subregional (wholesale) portion of the planned SRURP will rely primarily on the existing recycled water transmission and disposal system, with some relatively minor upgrades and additions. Most of the new facilities, however, will involve construction of the retail recycled water distribution system within the City of Santa Rosa. Under the wholesale/retail framework, the wholesale recycled water transmission system will include existing transmission pipelines and storage facilities, and all or part of the following: upgrades to pump stations, new post-storage treatment, pressure reduction facilities, and meters at points of delivery. Points of wholesale water delivery are planned on the west and south sides of the City.

Recycled water will be produced at the Laguna Treatment Plant. The transmission of recycled water to the retail distribution system will include:

- Operation and maintenance of the transmission pipeline system, including existing reclamation transmission pipelines (serving agricultural reuse and urban reuse in Rohnert Park and Santa Rosa) and potentially a section of the Geysers pipeline.
- Operation and maintenance of upgraded pump stations. The SRURP will require capacity expansion at the Rohnert Park pump station and either expansion of the Llano pump station or a new pump station at Ludwig Road. Pump station operating costs will include electrical costs as well as pump station maintenance.

[2] *SRURP Phase 1 Implementation Options – Draft Technical Memorandum*, prepared by Dave Coleman, Winzler & Kelly Consulting Engineers for the City of Santa Rosa dated October 22, 2007.

- Operation and maintenance of pressure-reducing stations. A pressure-reducing station will be required on the transmission main feeding Rohnert Park and may be needed if a portion of the Geysers pipeline is used to convey water to Ludwig Road. The pressure differential between the Geysers pipeline and the SRURP is great enough at times to allow for energy recovery.
- Operation and maintenance of post-storage treatment facilities. A detailed analysis of water quality issues resulted in recommendations to add polishing filtration for water from seasonal storage ponds to minimize clogging of irrigation systems. Chlorination of the water will inhibit re-growth of algae in the recycled water distribution system. Some chlorination facilities may be added to the retail distribution system.
- Operation and maintenance of wholesale water meters located at points of delivery into the retail recycled water distribution system.

The future operation of the recycled water transmission system will be similar to the current operation (with the addition of pressure reduction and post-storage treatment). More recycled water will be moved through the existing pipelines and storage system, but the basic operation will be similar to the current.

City staff has worked to identify the specific costs associated with current reuse operations. The City's financial accounting system is not designed for cost accounting purposes. Therefore determining the cost of specific operations is not directly possible with current reporting capabilities. As an example of the challenges, Llano pump station costs, which include high-head pumping into the Geysers pipeline as well as low-head pumping into reuse pipelines, are embedded in Laguna Treatment Plant operating costs. Determining the exact costs of reuse pumping at the Llano pump station would require isolating the pump station costs from the treatment plant costs, and then splitting the costs between high-head and low-head pumps.

Similarly, the reuse transmission system is used for agricultural reuse, urban reuse in Rohnert Park and Santa Rosa, and river discharge. Reclamation costs within the Subregional System include costs associated with reuse and river discharge. Reclamation costs would need to be dissected to develop separate costs associated with river discharge, agricultural reuse, urban reuse to Rohnert Park, and urban reuse to Santa Rosa. The level of precision in estimating costs of current operations is proportional to the level of effort directed to analyzing information captured in the financial accounting system.

The City should work to refine the estimated cost of SRURP wholesale operation as it proceeds with design of facilities, including pump station upgrades, pressure reduction facilities, and post-storage treatment.

While preliminary, estimates of operating and maintenance costs associated with the SRURP (once fully implemented) are in the range of $200 to $250 per AF, in current dollars.

Retail (Water Utility) Operations

The planned SRURP will include constructing a new and extensive recycled water distribution system within the City of Santa Rosa. Under the wholesale/retail framework, the retail

recycled water distribution system will include transmission and distribution pipelines, storage tanks, service connections, control valves, and related appurtenances. Points of wholesale water delivery to the retail water distribution system are planned on the west and south sides of the City.

The retail distribution of recycled water to end users will include:

- Operation and maintenance of the retail water distribution pipeline system, including storage tanks, control valves, service connections and related appurtenances.
- Operation and maintenance of chlorination facilities that may be located within the retail distribution system. A detailed analysis of water quality issues found that chlorination of water would inhibit re-growth of algae in the water distribution system. While primary chlorination facilities will be located within the wholesale system (downstream of polishing facilities), some chlorination facilities may be included in the retail water distribution system.
- Marketing to and conversion of existing potable water offset customers to recycled water.
- Working with new customers to identify opportunities for additional recycled water use and assisting with the implementation of new recycled water connections.
- Customer service, water conservation, utility billing, revenue collection and other aspects of the business relationship between the City of Santa Rosa and recycled water service customers.
- Compliance with recycled water regulations.
- Recycled water program management.

The future operation of the recycled water distribution system (retail system) will largely be the same as the current operation of the City's potable water distribution system. The cost of recycled water distribution operations will likely be higher than potable water distribution costs, when evaluated on a cost per customer or cost per AF of water delivered. This is due to the fact that the recycled water system will have fewer customers, lower sales volume per foot of pipeline, and additional regulatory requirements.

Other costs of recycled water service will essentially be identical to potable water service. These other costs include activities such as meter reading, utility billing, revenue collection, water conservation, customer service, plan review, and other new development services.

The higher unit cost of recycled water distribution should be offset by the lower cost of water supply. That is, the wholesale cost of recycled water will need to be lower than the cost of purchasing treated water from the SCWA.

While very preliminary, estimates of operating and maintenance costs associated with the retail recycled water operations within Santa Rosa (once the SRURP is fully implemented) may be in the range of $1,000 to $1,300 per AF, in current dollars.

Retail Recycled Water Rates

Under the wholesale/retail recycled water framework, retail recycled water distribution costs would be costs of the City's water utility and the retail recycled water revenues would be revenues of the water utility. The cost of purchasing recycled water from the Subregional System would be an operational expense of the water utility, similar to the purchase of water from the SCWA.

The City of Santa Rosa recently adopted recycled water pricing policies for the SRURP that tie the rates for recycled water close to the rates for potable water. Recycled water rates for irrigation uses will be set such that the first tier commodity rate will be 95 percent of the potable water rate (with no discount for higher tiers). Commercial and industrial recycled water customers will pay a uniform commodity rate that is 95 percent of the potable water uniform rate. In addition, all recycled water monthly service charges will be 90 percent of potable water service charges. Overall recycled water bills are expected to be 6 to 7 percent lower than water bills with potable water rates. This reduced cost to the end user is intended to offset the customer's higher costs of properly using recycled water in compliance with recycled water use regulations.

The cost of service nexus of the City's recycled water pricing policy is integrated with the cost of service analysis for general water service provided by the City's water utility. That is, with the exception of the discount to offset extraordinary costs of recycled water management, recycled water rates and potable water rates are equivalent and based on the total costs of water utility operations, including potable and recycled water costs.

The City has also adopted a Recycled Water Ordinance (September 2007), requiring all new water customers to accept recycled water (either now or in the future) if it is available to them and suitable for their use. Existing potable water customers will be encouraged to switch to recycled water, when available and appropriate, but not required to use it (at least at this time).

Considering the effects of both tiered commodity rates and monthly service charges on the revenues to be derived from recycled water sales, recently adopted water rates for 2008 are expected to result in revenue of about $1,300 per AF of recycled water sales. Even though the costs of the recycled water system will be embedded with other water utility costs, at full implementation retail recycled water sales revenue is expected to equal or slightly exceed the operating and maintenance costs of recycled water operations. Any net operating income would effectively be used to (1) offset the operating losses occurring during initial years of implementation, (2) help cover other water utility costs, and (3) help cover debt service obligations associated with constructing the SRURP.

Wholesale Recycled Water Rates

The wholesale water rate by which the water utility will pay the Subregional System for recycled water is intended to serve as the balancing mechanism for equitably sharing the cost of SRURP operations. The City has broad discretion on how the wholesale rate is determined. While the decision may be informed by cost analysis, cost of service is not a strict requirement for the determination of the wholesale rate. Because recycled water is emerging regionally as

an integral component of overall water resources, the market rate for water will also inform the decision on a wholesale rate. The various factors that guide the decision regarding the wholesale recycled water rate are discussed below, including discussion of the differing perspectives of the Subregional System and the water utility.

Subregional System Perspective

The Subregional System's primary mission is to accept wastewater from member agencies for treatment and disposal. The City strives to manage and operate the Subregional System to perform this mission as cost effectively as possible, within the constraints of the law, regulations, environmental standards, and other factors. The cost of wastewater treatment and disposal are shared by each member agency in accordance with the Subregional Agreement, and ultimately borne by the wastewater customers served by each member agency.

Once treated at the Laguna Treatment Plant, the Subregional System disposes of recycled water in a number of ways. The SRURP represents a significant expansion in the capacity for disposal through urban reuse. This method of disposal compliments other methods including river discharge, the Geysers project, and agricultural reuse. To the extent that the Subregional System receives revenue from the sale of recycled water, that revenue is applied against operating costs of the Subregional System and thereby reduces the costs borne by each member agency.

Historically, agricultural and urban reuse operations have been influenced by the need for achieving disposal objectives. Pricing policies focused on facilitating reuse. Costs not covered by revenues were passed on to member agencies, and ultimately their wastewater customers. In the current era of water resource constraints, recycled water is now recognized as a valuable water resource. In addition, the City has mandated the use of recycled water within the City for new development when the water is available and appropriate for the intended use. In the current environment, the City has an inherent obligation in operating the Subregional System to seek a high price for recycled water. Doing so reduces the net costs to member agencies, and to each agency's wastewater customers. In effect, to give away the resource (or sell it at too low a price) could be construed as a subsidization of water use by wastewater customers.

As a result, the Subregional System should seek to sell recycled water at prices that will achieve disposal objectives, but also fairly compensate the Subregional System based on the value of the resource being provided. While the cost of providing the water is a relevant consideration, it is ultimately the market value that determines fair compensation. The market value may differ for recycled water being provided to agricultural users, directly to urban users, or wholesale to a water service provider.

Water Utility Perspective

The City's water utility is obligated to provide water service to customers within its service area. In providing the service, the City must obtain the water, treat it to required standards, and distribute it to customers. The City provides water service primarily through purchasing treated water from the SCWA; it then distributes this water to customers through its water

distribution system. Limited groundwater is also available to meet water demands within the City. The SRURP represents a new source of supply for the City's water utility. While recycled water needs to be kept physically separated from potable water, and is only suitable for certain uses, it will help the City meet the overall demands of its customers.

As an enterprise of the City, the water utility is expected to cover the costs of providing service through the rates and charges imposed. In addition, there are legal requirements that water rates not exceed the cost of providing service[3]. In this regard, the water utility is motivated to provide water services as cost effectively as possible.

In operating the water system as cost effectively as possible, the utility should seek to minimize the amount it will pay for the wholesale purchase of recycled water. Recycled water purchases will become an operating cost of the water utility (just like water purchases from the SCWA), and will have a direct bearing on the cost of service analysis used to develop the City's water rates.

From the water utility perspective, the willingness to pay a wholesale rate for recycled water is tied to the overall cost of service of recycled water relative to other water supply options. Because the water utility will be directly bearing the operating cost of the recycled water distribution system (which will likely be more costly on a per AF basis than operating the potable water system), an acceptable wholesale recycled water rate will need to be below the cost of purchasing SCWA water by at least that cost differential.

Cost Analysis and Market Evaluation to Inform the Wholesale Rate Determination

The wholesale recycled water rate for the SRURP should be informed by cost considerations of both the Subregional System and water utility. Preliminary analyses have been performed. However, as the City moves forward with the design and implementation of initial phases of the SRURP cost analyses should be refined.

With respect to the Subregional System, the City should develop estimates of the per-acre-foot operating costs of recycled water disposal including river discharge, Geysers project, current agricultural reuse, current urban reuse, and the proposed SRURP. In addition, the revenues derived from each means of disposal should be applied against the cost of disposal. With this information, the City will have a better sense of the relative economic benefits of the various means of disposal.

With respect to the water utility, the City should develop estimates of the total per-acre-foot operating costs of the retail recycled water operation, including recycled water purchase costs. Since the recycled water purchase cost (i.e., wholesale rate) is not yet known various values can be included in the analysis. The City should also estimate the current per-acre-foot cost of operating the potable water system. The per-acre-foot operating cost of the recycled water system should then be compared with the cost of potable water operation. For this analysis, it is the cost differences that are relevant. Ideally, the recycled water system operating cost would

[3] Similarly, there are limitations on the amount that can be charged in demand fees paid by new development.

be commensurate with potable water system operating costs. With this information, the City will have a better sense of the reasonableness of potential wholesale recycled water rates.

As points of reference, the City's current wholesale cost of water from the SCWA is about $430 per AF and the average amount that the Subregional System receives from existing urban reuse is about $180 per AF.

In the end, the wholesale pricing approach must result in operational cost sharing that keeps the SRURP attractive to both the Subregional System and the City's water utility. Performing the analyses suggested above will result in a more informed decision regarding the appropriate wholesale rate for the SRURP.

Recommended Wholesale Recycled Water Rate for the SRURP

City staff and consultants have evaluated potential wholesale rates for the SRURP from a variety of perspectives, as outlined in the foregoing pages, using rough estimates of current and future operating costs. Based on these analyses, a wholesale rate for the SRURP of $225 per AF (in current dollars) would:

- Make the *retail* cost of service for recycled water attractive to the water utility and comparable to anticipated *retail* recycled water sales revenue;
- Provide more revenue (per AF) to the Subregional System than all current means of recycled water disposal;
- Provide a net operating cost to the Subregional System that would be lower than the net operating cost of existing urban reuse, agricultural reuse, and the Geysers project, and comparable to the direct cost of river discharge; and
- Provide reasonable compensation to the Subregional System for the estimated cost of SRURP wholesale operations.

A wholesale water rate for the SRURP of $225 per AF is recommended for consideration by the Board of Public Utilities. This rate should be evaluated annually and adjusted commensurate with changes in thebe evaluated annually and adjusted as appropriate commensurate with the changes in SCWA's wholesale water rate applicable to the City of Santa Rosa. As the SRURP is implemented, the City should review the basis and amount for the wholesale water rate, and consider applying similar market-based reasoning to the rates charged for other urban reuse projects.

IV. FUTURE URBAN REUSE PROJECTS FOR USER AGENCIES

Previous sections of this report addressed issues related to institutional structure, operations, and economics of the proposed SRURP. This section identifies issues that will need to be addressed for future urban reuse projects within the jurisdictions of User Agencies. The information in this section should serve as a starting point for discussions on the issues identified, and is not intended to serve as specific recommendations.

User Agency's Urban Reuse Projects

The Subregional System began providing recycled water for urban reuse within Rohnert Park in the mid-1990s. The Rohnert Park Urban Reuse Project (RPURP) currently provides for the disposal of about 336 million gallons (MG) of recycled water annually, or 4 percent of the Subregional System's annual recycled water disposal. The IRWP Master Plan identified approximately 200 MG of potential additional reuse opportunity in the Cities of Rohnert Park and Cotati.

In March 2007, the City of Cotati completed a *Recycled Water Feasibility Study*[4]. The study identified 109 potential recycled water customers with a total potable offset of 52.4 MG per year (approximately 161 AF per year). Six alternative recycled water projects were identified during the study. These alternatives range in size from 4.1 MG per year to 43 MG per year. Two project alternatives with a combined total capacity of about 10 MG per year (approximately 30 AF per year) were determined to be the most cost-effective.

The City of Rohnert Park has asked the Subregional System to evaluate the potential for expanding the RPURP. The Rohnert Park Urban Reuse Expansion Project (RPUREP) would extend existing recycled water distribution facilities to reach additional users. The feasibility of the RPUREP being studied and the potential size, scope, and cost of the project are not yet known.

Urban reuse within the City of Sebastopol may also be possible. While no study has been conducted to identify the urban reuse potential or feasibility within Sebastopol, the City of Sebastopol has indicated that future conditions may warrant considering the suitability for urban reuse within the City.

Institutional and Operational Issues and Options

While the wholesale/retail framework is the preferred approach for implementing the SRURP, User Agencies have expressed concern regarding this approach for urban reuse projects within their jurisdictions. The primary reason for this concern is the staff and resource limitations within each User Agency (User Agency cities are all considerably smaller than the City of Santa Rosa). Within the Cities of Cotati and Sebastopol, staff members responsible for utility

[4] *Recycled Water Feasibility Study*, City of Cotati, prepared by Winzler & Kelly Consulting Engineers, March 2007.

operations are also involved with public works, parks maintenance, and building maintenance functions. Taking on the responsibility of recycled water distribution system operations would be an unwelcome burden.

Interviews were conducted with Public Works managers for each User Agency city to identify issues and options related to urban reuse projects within their jurisdictions. In addition to staffing and resource limitations, other concerns were raised regarding regulatory compliance requirements, technical expertise, and facility ownership issues (i.e., risk and liability).

Santa Rosa Utilities management has indicated that the approach to urban reuse in each User Agency jurisdiction should consider the specific needs and interests of the agency at such time as a project is identified. The analysis herein attempts to identify how each of many discreet tasks or activities associated with provision of recycled water service might be provided with both Subregional and local interests in mind.

Exhibit 5 provides a summary of the major tasks and activities associated with operating an urban reuse project. It also includes comments on how service provision within each jurisdiction might be approached. For each task/activity, flexibility exists to tailor the specific approach to the needs and interest of the User Agency and the City.

A number of factors may influence the choice of institutional structure for future urban reuse projects, including number of connections, configuration of the distribution system, technical resources of each agency involved and operational efficiency. It may be that operation of the recycled water systems by the Subregional System is appropriate. It may be that a wholesale/retail model is the most appropriate, or that a hybrid of these approaches is most effective.

Exhibit 5
City of Santa Rosa -- Utilities Department
Potential Operation of Urban Reuse Projects of User Agencies

Task/Activity	Comments
Existing Customer Retrofit Planning and Conversion	Each User Agency (city) would establish the policies that may encourage or require existing potable water users to convert to recycled water, and also take the lead in identifying potential offset customers. Santa Rosa could provide the technical expertise and assistance to facilitate conversions.
New Development Approval	Each User Agency has development approval authority and responsibility within their jurisdictions. User Agencies could adopt recycled water use policies similar to Santa Rosa's or adopt their own, however, conditions of development approval should reside with each User Agency.
Plan Review	User Agencies could review development plans for compliance with recycled water standards and requirements, or could have that portion of plan review performed by the City of Santa Rosa. (1)
Meter Reading / Utility Billing / Revenue Collection	Each User Agency city currently operates a water utility and performs meter reading, utility billing, and collection tasks. These could be extended to recycled water customers with little additional cost or effort. Alternatively, Santa Rosa could perform these functions.
Recycled Water Rate Setting	The establishment of retail water rates for recycled water would be the responsibility of the retail service provider. This could either be the City of the Santa Rosa or the User Agency city. The wholesale recycled water rate, if applicable, would be established by the City of Santa Rosa.
Regulatory Compliance	RWQCB permits and regulations place this responsibility with the City of Santa Rosa. However, the responsibility could be assigned to a User Agency. (1)
Water Conservation	General water conservation education and assistance could be provided within each User Agency jurisdiction through their own water conservation programs. Specialized assistance related to recycled water usage could be directed to Santa Rosa (as an element of regulatory compliance).
General Recycled Water Education and Awareness	Santa Rosa will develop materials and information to inform and educate the general community on recycled water uses and impacts. This material and information could be communicated within User Agency jurisdictions by Santa Rosa or via User Agency communication mediums.
Distribution System Operation, Maintenance, and Repair	User Agencies have each expressed a desire for Santa Rosa to be responsible for recycled water distribution system operation, maintenance, and repair based primarily on the limited resources that each Agency has to perform this function. However, the function could be performed by either Santa Rosa or a User Agency.
USA Mark Outs	The City of Santa Rosa could mark out recycled water facilities it is responsible for in response to USA requests. Alternatively, User Agency GIS mapping could include recycled water facilities to consolidate recycled water mark outs with local water and sewer mark outs.
Emergency Response	User Agencies may be better positioned to initially respond to emergency call outs for leaks, main breaks, or other events that may involved recycled water facilities. Santa Rosa would respond (as an element of distribution system repair) if it is determined that recycled water facilities it is responsible for are affected by emergency events.

Notes:
(1) Santa Rosa currently provides services related to industrial waste discharge. This task could be similarly structured.