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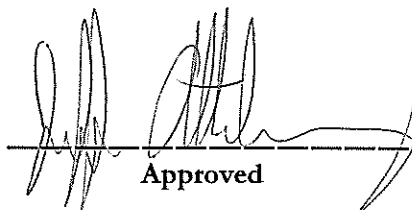
# **WATER SUPPLY REPORT**

## **Greenwood Commerce Center**

Napa County Assessor's Parcel Number  
057-210-055

**Prepared by:**

Jeff Atteberry, P.E.

  
Approved

9-3-08  
Date

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## **WATER SERVICE REQUEST**

### **DESCRIPTION OF PROJECT**

Napa Valley Partners, LLC is seeking a Use Permit for a 374,926 square foot building on a 19 acre parcel located at the southwest corner of Highway 29 and Airport Boulevard. The zoning is IP (Industrial Park)/AC (Airport Compatible) and the anticipated usage for the building is an Industrial Park.

### **WATER SERVICE REQUEST**

#### **Average Daily Demand**

Mr. Gary Graves of Sierra View on behalf of Napa Valley Partners, LLC submitted a will-serve questionnaire on August 20, 2008. The questionnaire concluded that the total water demand, excluding irrigation, will be 1,100 gallons per day. Based on review of the questionnaire submitted by Mr. Graves this demand is a reasonable estimate.

The questionnaire also concluded that the total irrigation water demand on the City's system is 0 gpd. The irrigation demand will be met by the Napa Sanitation District.

The total average annual demand equals 1,100 gallons per day or 1.2 acre feet per year (AFY)

#### **Peak Day Demand**

Mr. Graves, in his response to the City of American Will Serve Questionnaire estimates that the maximum day demand will be 2,400 gpd. Based on review of the questionnaire submitted by Mr. Graves this demand is a reasonable estimate.

### **Conservation Measures Included in Project**

The project includes numerous water conservation measures, including:

- Dual plumbing for future conversion of toilets to recycle water
- Low flow plumbing fixtures
- Drought-tolerant landscaping
- Use of recycled water for landscaping

## **CONSISTENCY**

### **URBAN WATER MANAGEMENT PLAN**

The project's estimated total annual demand of 1.2 AFY, is consistent with the demands estimated in the Urban Water Management Plan. The Urban Water Management Plan estimated 13.83 AFY for the 19 acre site but assumed that only 16% of the non-vineyard demands outside of the then-approved sphere of influence would be met by recycled water. The projects estimated average demand for potable water of

1,100 gallons per day, or 1.2 AFY for 19 acres, is well below the Urban Water Management Plan estimate after subtracting 16% for recycle water.

## **RECYCLED WATER FACILITIES PLAN**

The project site is outside the City's recycle water service area.

## **WATER CONSERVATION IMPLEMENTATION GUIDELINES**

The project has not yet been reviewed for consistency with the Water Conservation Guidelines adopted by the City Council on 10/23/07. This should be accomplished prior to issuance of a building permit.

## **CONSISTENCY WITH ORDINANCE 2000-08**

Ordinance 2000-08 states that all projects within the City of American Canyon conforming to City zoning as industrial and all projects within the unincorporated area of Napa County, for which the city provides water connections pursuant to Municipal Code Section 13.10.040 are subject to a limit of 650 gallons per acre per day average annual water demand. The projects water demand is 58 gallons per acre per day for the 19 acres to be developed. Thus, it is consistent with the ordinance.

## **WATER FOOTPRINT**

### **ZERO WATER FOOTPRINT DEFINITION**

On October 23, 2007, the City Council of the City of American Canyon adopted the following definition of Zero Water Footprint (ZWF).

*No loss in water service reliability or increase in water rates to the City of American Canyon's existing customers due to the requested increased demand for water in the City's water service area.*

Appendix A provides the process for water service requests considered by the City Council as part of their policy decision on Zero Water Footprint.

The important ZWF policy decision followed shortly after the Napa County Local Agency Formation Commission (LAFCO) adopted Policy Resolution 07-27 on October 15, 2007, which established that water service requests outside the City of American Canyon city limits but within the Airport Industrial Area are not subject to LAFCO review. Because the City of American Canyon lacks land use jurisdiction in this area, it became necessary to implement a policy and process that protects the reliability and financial viability of the City's water enterprise while providing a predictable outcome for those seeking new or increased water service.

***It is the City of American's policy that the ZWF policy and process apply equally both within the City limits and within the approved extraterritorial service area.***

## **PROJECT'S IMPACT ON RELIABILITY**

The Urban Water Management Plan finds that, as of 2005, the City of American Canyon would experience a shortfall in water supplies in multiple-dry-years of up to 427 acre feet and single-dry-years of up to 897 acre feet. Due to increased demand, the shortfall would worsen even as additional supplies are obtained. By the year 2015, the City of American Canyon would experience a shortfall in multiple-dry-years of up to 1,037 acre feet and in single-dry-years of up to 1,557 acre feet. By contributing to the shortfall, the project would reduce the reliability of American Canyon water service.

## **PROJECT'S IMPACT ON RATES**

The project would not have an impact on rates.

## **PROJECT'S WATER FOOTPRINT**

The project does not have a zero water footprint. It would result in a loss in water service reliability due to the increased annual water demand without an offsetting source of supply. Thus, this Water Supply Report has been prepared to analyze the project's contributions and impacts in detail.

# **PROJECT'S CONTRIBUTION**

## **CAPACITY FEE**

Based on the Water and Wastewater Rate and Fee Study prepared by Bartle Wells and Associates for the City of American Canyon and the December 18, 2007 approval of the Water Capacity Fee Ordinance, the project would generate water capacity fees of **\$41,064** based on the peak day demand of 2,400 gpd times \$17.11 per gallon.

## **REIMBURSEABLE IMPROVEMENTS**

The project will also be required to construct a new water main along the future Devlin Road alignment. To the extent that this water main exceeds the standard water main size, it will be eligible for reimbursement.

# **CAPITAL PROGRAM STATUS**

## **SUMMARY**

The City of American Canyon's Water Capital Program will address the supply shortfalls identified in the 2005 Urban Water Management Plan and will meet the treatment, storage, and distribution needs as the City implements its General Plan. Appendix B describes the program in detail.

## **SYSTEM PLANNING STATUS**

The City of American Canyon is currently preparing an Integrated Water Management Plan, which will address all water resources – drinking water, recycled

water, wastewater, groundwater, creeks and wetlands in a comprehensive way. The study was initiated in December 2006 and Phase I is complete. The work products within Phase I include a technical review of the water treatment plant, goal setting and performance criteria, a water loss audit, an analysis of existing conditions, a report on threatened and endangered species constraints, , feasibility study of a well in the Newell Open Space Preserve, a funding assistance survey, an investigation into corrosion problems in a portions of the water system, a unified hydrology analysis, and a Strengths, Weaknesses, Opportunities and Threats report.

Phase II of the Integrated Water Management Plan has been initiated. Phase II will include an estimate of anticipated resource demands, feasibility study of a high capacity well field a wastewater source identification and local limits study, a facilities plan for wastewater improvements, and an analysis of the alternative water resource solutions, a water conservation feasibility study, assessment of a possible well at the American Canyon High School property, Geographical Information Systems (GIS) Data Entry, and pilot testing of Water Treatment Plant modifications.

A water and wastewater rate and capacity fee report was prepared. It proposed substantial increases in water and wastewater rates and in capacity fees. It was endorsed by the City's Blue Ribbon Committee on Water Resources and was approved by the City Council at a public hearing on December 18, 2007.

The Blue Ribbon Committee on Water Resources was formed in March 2007 to serve as a sounding board on all water related issues. The committee includes elected and appointed City leaders, long-term residents, newer residents, developers with interests inside and outside the City limits, vineyard owners, business owners, agency representatives, a County Supervisor and retired water professional. Water, Wastewater, Recycled Water, Finance and Creeks/Wetlands Subcommittees have been formed. The full committee has met monthly, and the subcommittees have met numerous additional times. The Blue Ribbon Committee is expected to remain active for the next two years as the Integrated Water Management Plan is completed and initial projects are implemented.

## **WATER SUPPLY**

### **Water Supply Implementation Status**

The status of the water supply projects in the Final Water and Wastewater Rate and Fee Study is as follows:

- Water rights - Purchase of 1,560 annual acre feet of water rights from Sacramento Valley agricultural interests. The City of American Canyon, the City of Napa and the Napa County Flood Control and Water Conservation District have met with one interested seller, who provided a letter summarizing the availability and possible terms for the water supply. They indicated that the requested amount would be available to the City of American Canyon for long-term transfer. During cutbacks north of the Delta of the Central Valley Project, the transfer would be subject to a reduction of 25%. The long-term transfer of appropriative rights would require approval by the State Water Resources Control Board. The City of American Canyon and the City of Napa are currently seeking a proposal from a water transfer consultant to assist with this purchase. About three years would be needed to complete the long-term transfer. Short-term transfers are also available on a year-to-year basis.

Water Code Section 109 contains a declaration of state policy favoring voluntary water transfers, and directs the Department of Water Resources, the State Water Resources Control Board and all other state agencies to encourage voluntary water transfers. Water Code section 475 contains legislative findings and declarations favoring voluntary water transfers.

The Sacramento Valley Integrated Water Management Plan promotes water transfers, both within the Sacramento Valley and outside of it, as one of its key water management strategies.

On May 20, 2008, the City Council approved a consulting contract to evaluate three potential sellers. After the City selects a preferred seller, the consultant will describe the next steps needed to complete a transfer. The schedule for the consulting contract calls for completion in 2008.

- North Bay Aqueduct expansion - Project to expand the ability of the North Bay Aqueduct to deliver more water. An increase of 5.5 cubic feet per second (cfs) in conveyance capacity would allow the City of American Canyon to treat an additional 3.5 million gallons per day during peak months of the year. It would provide conveyance capacity for approximately 3,300 acre feet per year.

The Department of Water Resources completed a study in 2005 which confirmed the feasibility of expanding the conveyance capacity of Reach 3a of the North Bay Aqueduct from 46 to 65 cfs. The project would replace the four existing pumps and motors, furnish and install a new air chamber, furnish and install new check valves, furnish and install required electrical equipment, and furnish and install a parallel 36-inch steel pipeline from the surge tank to the terminal tank(s).

Currently, the County of Napa and the California Department of Transportation (Caltrans) are performing environmental review on a project to widen Jameson Canyon Road (SR 12). When it is constructed, about half of the length of the North Bay Aqueduct will need to be relocated out of the roadway at the expense of the highway project. This would be an appropriate time to expand the North Bay Aqueduct. The agenda for the November 2007 meeting of the Napa County Water Technical Advisory Committee included a discussion of this opportunity.

Solano and Napa County water agencies have contracted with CDM to evaluate future water demands and NBA capacity. Their consulting services are in progress.

- North Bay Aqueduct terminal tank replacement - Project to replace and expand the seismically deficient water tank at the end of the North Bay Aqueduct. One 7 million-gallon open air tank is being replaced with two 5-million gallon enclosed tanks. This project is under construction. The first two million-gallon tank is complete and the 7-million gallon tank is being demolished.
- Vallejo water rights purchase - Exercise remaining potable water contract options from city of Vallejo for use in times of drought. The 1996 contract



between the City of American Canyon and the City of Vallejo currently provides the City of American Canyon with treated water in the following amounts:

- A maximum of 2.15 million gallons per day on a peak day or
- A maximum of 1.3 million gallons per day for a peak month or
- A maximum of 1,351 acre feet per year

The contract also provides for 500 acre feet of raw water, available through Vallejo's riparian permit. It also provides for an additional 500 acre feet of raw water per year during emergency conditions.

The contract provides options for the City of American Canyon to purchase additional capacity in the following periods:

- 2007-2011, 1.15 million gallons per day on a peak day
- 2012-2016, 0.9 million gallons per day on a peak day
- 2017-2021, 0.9 million gallons per day on a peak day

The total water supply available under the remaining options is 1,854 AFY.

The Integrated Water Management Plan will guide the City's decision on whether to execute the remaining potable water contract options with Vallejo or to use the capacity fees for more cost-effective supply sources.

On June 16, 2008, the City of American Canyon received an offer from the City of Napa to evaluate as an alternative to the 2007-2011 Vallejo Water Supply option.

- Emergency groundwater bank - American Canyon's share of project to "bank" groundwater for times of emergency. The feasibility of this project is currently being investigated as part of the Integrated Water Management Plan. It is conceived as a high-yield well field which serve as a regional facility for municipalities in Napa County. Based on initial hydrogeology investigation, Soscol Creek would be one probable location for such a high-yield well field. In 2007, the City of Napa denied a request to install a commercial well on Anselmo Court, which would have tapped this resource. The reports provided to the City of Napa indicated that wells in this vicinity have been found to produce high-quality water at rates of 1,000 to 2,000 gpm. A feasibility report on high-capacity wells at this location was approved by the Blue Ribbon Committee at their May 2008 meeting.
- Water conservation program implementation - Project to fully implement the City-approved Water Conservation Guidelines. The City's current water conservation program includes rebates for low-flow toilets, public education, leak detection, and a master irrigation controller for City parks. A Water Conservation Implementation Plan has been drafted to fully implement the Best Management Practices of the California Urban Water Conservation Council, of which the City of American Canyon is a member. It sets forth guidelines for new development and provides an implementation plan for new programs such as conservation pricing, a water conservation ordinance, enhancement of the leak detection programs, enhancements to the public awareness program, and enhancements to the rebate programs. It estimates that 744 AFY will

ultimately be supplied through water conservation. Startup costs for several of these programs are included in the capacity fee, and several startups are already in progress.

On January 1, 2008, the City initiated a clothes washer rebate program in partnership with other Bay Area water agencies and PG&E. The rebate program is partly funded through a State of California Proposition 50 grant. It will provide rebates ranging from \$125 - \$200 depending on the washing machine efficiency.

Phase II of the Integrated Water Management Plan calls for a water conservation feasibility study. Cleanup of the historical billing record data has been completed to allow for selection of representative sample homes to participate in a detailed survey of water use. As of June 2008, letters have been sent to 200 homes soliciting up to 25 participants in the study. The feasibility study will be complete in 2008 and will lead to a more precise estimate of future water demands.

- Recycled water implementation – Project to implement the Recycled Water Facilities Plan approved by the City Council in 2003. Currently, the City of American Canyon recycles 100 AFY of wastewater to a vineyard directly adjacent to the Wastewater Treatment Plant. The permit for recycled water distribution was issued in 2005. Further expansion of the system will require completion of one remaining segment of pipeline and a storage tank. The 1.0 million gallon storage tank, Recycled Water Tank #1, has been designed and has received environmental approval and all necessary permits. It will be completed concurrently with East Tank #1 by December 31, 2009. The pipeline will be completed with prior to improvements to American Canyon Road West. A consulting contract has been awarded for the pipeline design. It will be completed by December 31, 2009. The City has received a \$2.5 million Proposition 50 grant for constructing the recycled water distribution system, which requires that the system be completed by 2010 and achieve 1,000 AFY of distribution by 2011.

Additionally, the Napa Sanitation District is implementing a recycled water system in the City's extraterritorial service area, which includes the Airport Industrial Area. Landscape irrigation within significant portions of the Napa Valley Gateway Business Park have been converted to recycled water. Based on analysis of the water use since this conversion has taken place, potable water use has been reduced by approximately 50% for the properties served by recycled water. The Napa Sanitation District has adopted a Recycled Water Strategic Plan which calls for converting all of the landscape irrigation in the Airport Industrial Area to recycled water. Additionally, several industrial users are committed to using recycled water for their process demands. The Urban Water Management Plan estimated the ultimate yield from this source of supply to be 226 acre feet per year, which represents less than 20% of the ultimate Airport Industrial Area demand and appears to be conservative (low). The scope of the Integrated Water Management Plan includes a

more comprehensive estimate of ultimate recycled water demand in this area.

The Napa Sanitation District is also pursuing a recycled water Aquifer Storage and Recovery (ASR) project. They have completed a hydrogeological investigation of five alternate sites, which concluded that two locations in Jameson Canyon were feasible. They are now performing detailed investigation of the preferred site, which is located in lower Jameson Canyon. The ASR project would benefit American Canyon's water supply by improving the reliability of the NSD recycled water supply. It could also serve as a supplemental source to the City of American Canyon during peak summer irrigation periods when the wastewater treatment plant does not generate sufficient supply.

In summary, the City's long term water supply and demand situation is as follows:

**Table 1**

<b>LONG TERM WATER SUPPLY AND DEMAND</b>			
Source	Normal Year	Multiple-Dry-Year	Single-Dry-Year
State Water Project	3,640	1,976	1,508
Current Vallejo Potable Water Contract	1,351	1,216	1,216
Current Vallejo Contract for Raw Permit Water	500	450	450
Current Vallejo Contract for Raw Water during Emergencies		450	450
Subtotal, Current Supplies	5,491	4,091	3,623
City of American Canyon Recycled Water	1,000	900	900
Napa Sanitation District Recycled Water	226	203	203
Water Conservation	744	744	744
Water Transfer from Sacramento Valley	1,560	1,170	1,170
Remaining Vallejo Potable Water Contract Options	1,854	1,668	1,668
Subtotal, Additional Supplies	5,384	4,685	4,685
Total Long Term Water Supply	10,875	8,776	8,308
(Demand)	(7,026)	(7,026)	(7,026)
Surplus/(Shortfall)	3,849	1,750	1,282

The City of American Canyon has developed a capacity fee program which, when implemented, will ensure an adequate supply of potable and recycled water to meet demands under normal years, multiple-dry-years and single-dry-years

## **Water Supply Alternatives**

The Blue Ribbon Committee is currently evaluating alternative water supplies. One of the most promising would be to harvest the rain that currently falls on American Canyon by tapping into groundwater supplies. If groundwater wells yielding 4.5 mgd could be developed, it would not be necessary to purchase additional Vallejo options or to expand the North Bay Aqueduct. Bulletin 118 from the California Department of Water Resources states that wells up to 300 gallons per minute are found in American Canyon's groundwater subbasin, the Napa-Sonoma Lowlands. A well reportedly yielding 400 gallons per minute is located on the American Canyon High School property would require 11 wells yielding 300 gallons per minute to meet the peak demand. Groundwater research was recommended by the Urban Water Management Plan and is being completed through the Integrated Water Management Plan. A 72-hour test will be performed on the High School well in Summer 2008. The City of American Canyon and the Napa Valley Unified School District have entered into an Memorandum of Understanding (MOU) regarding the high school project; one provision of this MOU is an agreement to cooperate on development of the well.

During 2008, the City of American Canyon experienced a 65% cutback in the State Water Project allocation. This would have resulted in a shortfall of 2,300 AFY. However, a number of alternate sources were developed, and implementation of the Water Shortage Contingency Plan has not been necessary as of May 23, 2008. These sources include:

- Table A Previous Year Carryover. The City is able to carry its unused Table A water over from the previous year to the current year. This additional water is treated as if it were additional Table A water, except it is lost as soon as State Water Project (SWP) storage at the San Luis Reservoir fills and spills due to pumping from the Banks Pumping Plant.
- Other Cities in Napa County Carryover Water. When available, the City can purchase carryover SWP water from the previous year from other cities in Napa County. This additional carryover water has the same conditions as our carryover water; that is, it is treated as if it were additional Table A water, except it is lost once the San Luis Reservoir "fills and spills" because of pumping at the Banks Plant.
- Article 21 Water. Article 21 water is available after the City uses its SWP scheduled monthly allotment when unbalanced conditions exist in the Delta. The Delta is considered to be in an unbalanced condition when rain and snowmelt water is flowing out under the Golden Gate Bridge into the Pacific Ocean.
- SWP Dry-Year Program. It is possible to purchase additional water through the SWP during dry years, when Sacramento Valley farmers willingly let their land lie fallow and make their water available to State

Water Contractors. In addition, there are occasional reservoir re-operation activities that some water agencies can do that make water available for sale to buyers. Approvals from DWR and/or SWRCB are often required to allow transfer and conveyance of the water from seller to buyer.

- Pool A and B Water. State Water Contractors that decide not to draw all or a portion of their entitlements in any given year may place their unused water into a pool for resale by DWR to other State Water Contractors.
- Yuba River Accord. This agreement between the Yuba County Water Agency, the Department of Fish and Game, and several other regulatory agencies and environmental groups would revise the operation to provide higher flows in the lower Yuba River and allow the Department of Water Resources to purchase and transfer this water to State Water Project and Central Valley Project contractors in dry years.
- Vallejo Water Service Addendum No. 1. This addendum would allow American Canyon to receive up to 500 acre feet per year of raw water when the City's entitlement is reduced due to environmental or other constraints.

## **WATER TREATMENT**

### **Water Treatment Implementation Status**

The City has two water treatment facilities, side-by-side on the same site at 205 Kirkland Ranch Road: a 2.5 million gallon per day (mgd) conventional treatment plant completed in 1976, and a 3.0 mgd advanced technology treatment plant completed in 2004. The advanced technology treatment plant uses membranes manufactured by Zenon Corporation, as does the wastewater treatment plant.

Additional treatment capacity is needed to achieve the General Plan EIR peak day demand estimate of 10.0 mgd. The membrane plant was designed to accommodate an additional 3.0 mgd expansion within the existing structure. This is included in the capital fee capital program. Expansion to the North Bay Aqueduct (NBA), as discussed above, would be needed to meet the peak day flow requirements for this additional treatment. Under this approach, the total treatment plant capacity would be 8.5 mgd. The remaining 1.5 mgd of peak treated water capacity could come from the City of Vallejo through the water supply contract discussed above. The Vallejo contract currently provides up to 1.3 mgd of peak day capacity during a peak month, which would be more than adequate to meet the treatment gap. If all of the remaining options were executed, the Vallejo contract would provide up to 3.1 mgd of peak day capacity during a peak month. An additional metering station would be needed to deliver this water to the City of American Canyon distribution system; this metering station is included in the capacity fee capital program.

### **Water Treatment Alternatives**

The City of American Canyon also enjoys a physical connection to the City of Napa's treated water supply. Currently, the City of Napa treated water is provided on an informal basis in the absence of an agreement. On June 17, 2008, the City Council will consider approval of a one-year agreement with the City of Napa to treat and wheel

water on behalf of the City of American Canyon. The agreement provides up to 1 mgd of treatment capacity in normal circumstances and up to 2.25 mgd when the North Bay Aqueduct is out of service.

## **WATER STORAGE, TRANSMISSION, AND DISTRIBUTION STATUS**

Two additional storage tanks for treated water are needed to support anticipated fire flows and daily demands for the cumulative condition. East Tank #1, a 2.5 million gallon potable water tank, has been designed for a site to the east of Newell Drive. The base of the tank will be set at elevation 195 to match the existing Oat Hill #1 tank. The two tanks together will serve the main pressure zone in the City of American Canyon. Negotiation is underway for the site for East Tank #1. A mitigated negative declaration has been completed, the plans and specifications are 95% complete, and regulatory permits have been obtained. The land is to be acquired by June 30, 2008 and construction is to be completed by December 31, 2009.

A variety of projects are included in the capacity fee capital program to expand the water distribution system, to repair existing deficiencies, or a combination of the two. Recently, Flow Control Valve (FCV) #9, which overly restricted water flow from the treatment plant to the distribution system was removed. The backbone of the distribution system is a 14" diameter transmission main which runs down SR 29; it was built in the 1950s, is badly corroded and is being replaced in segments as part of a biennial water main replacement program and by new development. As it is replaced, additional capacity will be added and water loss will be reduced. As demands grow, there is a need for additional connections across SR 29; project is planned to complete three connections. Similarly, development on the east side of SR 29 will require closing gaps in the existing water main. Ultimately, increased flows from the water plant will require transmission improvements, either a pump station or another pipeline, on the east side of SR 29.

## **WATER CAPITAL PROGRAM FINANCIAL STATUS**

The Water Capital Program is primarily funded by capacity fees, supplemented by capital funds from the Water Operations Fund. The City of American Canyon has adopted a fiscal policy which requires new development to fully fund improvements needed to serve that development. Accordingly, the City's Blue Ribbon Committee on Water Resources recommended that the City Council approve a significant increase in the water capacity fee. The capacity fee for a single-family residence has been increased from the prior rate of \$6,445 to a new rate of \$11,634. The fees were approved at a public hearing on December 18, 2007.

## **VINEYARDS ANALYSIS**

### **VINEYARDS DECISION**

The California Supreme Court decision "Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova and Sunrise Douglas Property Owners Association et. al" sets forth guidelines for evaluating the water supply of a project under the California Environmental Quality Act (CEQA). It requires that water supplies not be

illusory or intangible, that water supply over the entire length of the project be evaluated, and that environmental impacts of likely future water sources, as well as alternate sources, be summarized.

### **Facts with respect to solutions to water supply problems**

The City of American Canyon has developed a capacity fee capital program which, when implemented, will ensure an adequate supply of potable water and recycled water to meet demands under normal years, multiple-dry-years, and single-dry-years.

### **Water supply over the life of the project**

The project is a single phase. Accordingly, an analysis of water supply for later phases is not required.

### **Impacts of likely future water sources**

Potential environmental impacts of purchasing a permanent transfer of 1,560 acre feet per year of water rights from Sacramento Valley agricultural interests have not yet been evaluated. However, because the water would be used to make up shortfalls in the State Water Project supplies and would be conveyed using existing State Water Project facilities, the transfer would not require the construction of any new facilities. Also, such an intra-regional transfer would be consistent with the Sacramento Valley Integrated Regional Water Management Plan, which has been subject to significant public input and environmental review. Lastly, several of the potential sellers of water rights have completed environmental review of similar permanent transfers.

The environmental review of North Bay Aqueduct expansion has not been initiated. However, the area of disturbance of the pipeline would largely be included within the area impacted by the Jameson Canyon (SR 12) widening project, which is currently being evaluated by Caltrans through a mitigated negative declaration.

No environmental review has been performed for a potential emergency groundwater bank. However, such a groundwater bank is intended to improve the reliability of water supplies and is not to serve as a primary water source. Also, it should be noted that wells in the vicinity of Soscol Creek historically served the American Canyon area as well as portions of Solano and Contra Costa counties with potable water supply. The wells have been inactive since the mid-20<sup>th</sup> century.

No additional environmental review would be needed to execute the remaining options for treated water supply from the City of Vallejo because these options are included within the 1996 contract.

Water conservation would result in no negative impacts to the physical environment.

A mitigated negative declaration was prepared for the recycled water distribution system when the Recycled Water Facilities Plan was adopted by the City Council in November 2003. Impacts were minimal because the pipelines were to be located in existing public rights of way.

### **Possible replacement sources and their impacts**

Development of groundwater as an alternative municipal supply is currently under study as part of the Integrated Water Management Plan. Potential environmental

impacts have not yet been evaluated. However, 41 existing wells are included in the Department of Water Resources records for the City of American Canyon area. The average flow rate for these wells varies from approximately 5 to 20 gpm, with the total between all wells of approximately 500 gpm. This does not include the well on the high school property. Most, if not all, of these wells will eventually go out of service as City of American water service is supplied. Thus, a minimum of 500 gpm, which would equate to 807 AFY, would be available without increasing the rate of withdrawal of groundwater.

## **RECOMMENDED MITIGATIONS**

### **LONG TERM WATER MITIGATIONS**

The potable water impacts of Greenwood Commerce Center project will be fully mitigated by the financial contribution it will make to the water capacity fee program.

### **SHORT TERM WATER MITIGATIONS**

It is assumed that the project will be occupied by May 2009 which would represent 50% of the demand for the 2008/09 water year. It is assumed that 100% of the project is occupied for the 2009/10 and 2010/11 water years.

The additional source of supply from acquiring a permanent transfer of water rights from Sacramento Valley agricultural interests will not be available until the 2011/12 water year, based on three years from the anticipated completion of the evaluation of potential sellers, which is currently underway and is expected to be completed by December 31, 2008.

The recycled water system will not be fully implemented until 2010/11 water year, based on completion of Recycled Water Tank #1 by December 21, 2009 and the remaining pipeline by December 31, 2010.

A decision will not be made as to executing the 2007-2011 option under the Vallejo water contract until after the Integrated Water Management Plan is completed in 2009. If an alternate supply is chosen, it would require a minimum of two years to implement.

Thus the project would result in potential reliability impacts during multiple-dry-year and single-dry-year conditions during the 2009/10 and 2010/11 water years. This impact can feasibly be mitigated, however, by providing funds to the City of American Canyon to purchase dry-year water, if necessary. Dry-year water is available either through the State Water Project Contractor's Association or from individual sellers. The cost of dry-year water is currently on the order of \$200 per AF per year, and no environmental review is required on a one-year transfer. Acquisition of one-year water transfers for the 2009/10 and 2010/11 water years will mitigate short term impacts, as follows:

**Table 3**

<b>SHORT TERM MITIGATION</b>					
<b>Water Year</b>	<b>Percent occupied</b>	<b>Annual demand (AF)</b>	<b>Water needed</b>	<b>Estimated cost/AF</b>	<b>Short-term mitigation</b>



			(AF)		
2008-09	0%	1.2	.6	\$220	\$110
2009-10	100%	1.2	1.2	\$240	\$288
2010-11	100%	1.2	1.2	\$260	\$312
Total					\$710

The project will contribute the above amounts as non-refundable payments to the water operations fund to allow the City to acquire dry-year water, if necessary. If the long-term mitigations are not in place prior to the 2011-12 water year, the project will continue to make annual non-refundable payments until the short-term impacts are mitigated by completion of long-term improvements.

## **OPPORTUNITIES TO REDUCE PROJECT'S WATER FOOTPRINT**

### **ON-SITE CONSERVATION OPPORTUNITIES**

The project will be reviewed for additional on-site conservation opportunities during the building permit plan review process.

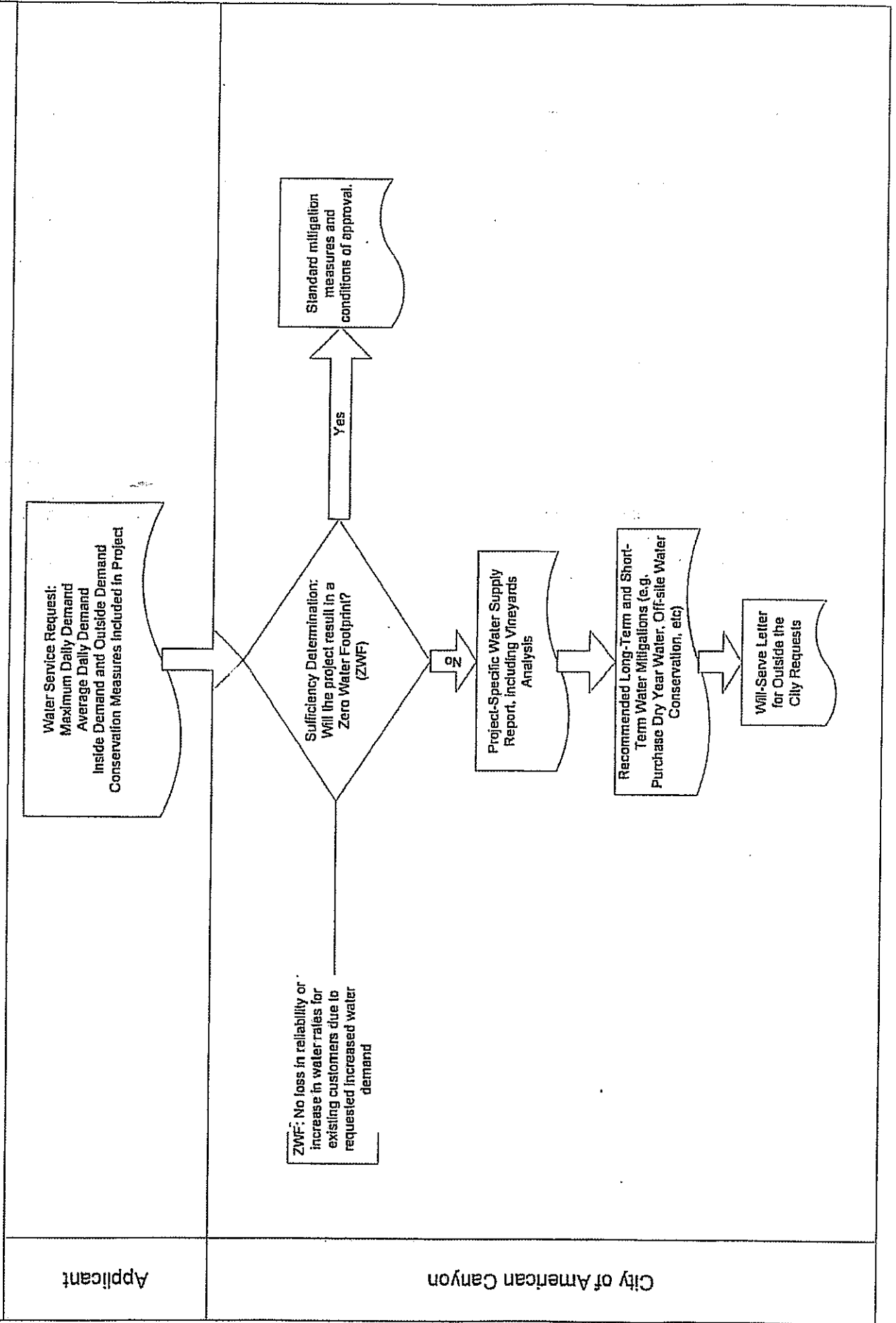
### **OFF-SITE CONSERVATION OPPORTUNITIES**

The project could reduce its water footprint by including one or more of the following off-site water conservation opportunities:

- Conversion of existing toilets to high-efficiency toilets
- Conversion of existing washing machines to high-efficiency, front-loading washing machines
- Conversion of existing urinals to waterless urinals
- Conversion of existing irrigation demands from potable water to recycled water
- Conversion of existing industrial demands from potable water to recycled water
- Completion of a landscape conversion project

**APPENDIX A**  
**WATER SERVICE REQUEST PROCESS**

# City of American Canyon Water Service Request Process



Applicant

City of American Canyon

**APPENDIX B**  
**WATER CAPACITY CAPITAL PROGRAM PROJECTS**

# City of American Canyon

## Water Enterprise Capital Improvement Program Summary

Project Name	Project Description/Need	Projected cost and financing		
		Cost	Ratepayers	Development
Water supply				
Water rights	Purchase of 1,660 annual acre feet of water rights from Sacramento Valley agricultural interests	\$7,500,000	0%	100%
North Bay Aqueduct expansion	Project to expand the ability of the North Bay Aqueduct to deliver more water	4,400,000	0%	100%
North Bay Aqueduct interest payments	Ongoing interest payments for loan to build North Bay Aqueduct	1,440,000	47%	53%
North Bay Aqueduct terminal tank replacement	Project to replace and expand the selsmically deficient water tank at the end of the North Bay Aqueduct	2,165,000	47%	53%
Valejo water rights purchase	Exercise remaining potable water contract options from city of Vallejo for use in times of drought!	12,295,908	0%	100%
Emergency groundwater bank	American Canyon's share of project to "bank" groundwater for times of emergency	1,200,000	0%	100%
Water conservation program implementation	Project to fully implement the City-approved Water Conservation Guidelines	400,000	0%	100%
Water treatment				
Zenon cassette addition	Project to improve treatment of water at membrane treatment plant, anticipating future regulations	50,000	0%	100%
Zenon plant expansion	Project to expand potable water treatment from 5.5 mgd to 8.5 mgd	3,000,000	0%	100%
Sludge handling expansion	Project to increase ability to handle sludge generated during water treatment	500,000	0%	100%
Recycled water				
Phases 1-6	Projects required to develop recycled water as a water source, includes new pipelines and a recycled water reservoir	15,608,500	0%	100%
Transmission, Distribution and Storage				
East Tank #1	New water tank in main pressure zone required to meet needs of future growth	4,500,000	0%	100%
East Tank #2 (High School Tank)	New water tank in high pressure zone provides benefits for both new growth and reduced pumping costs to City	4,000,000	0%	100%
Hwy. 29 crossings	Projects required to increase connections across SR 29 as demand grows	400,000	0%	100%
14" realignment/replacement	Replacement of badly corroded pipeline to reduce water loss and increase capacity	3,000,000	47%	53%
Waterline Eastside of 29 (W-14 and W-15)	Project to close gaps in new water line to serve development on east of SR 29	1,500,000	30%	70%
Broadway Vallejo potable water metering station	Required to increase the capacity of potable water delivery from Vallejo	300,000	0%	100%
Eastern sphere transmission improvements	Improvements to handle increased water supply from treatment plant	400,000	0%	100%
Repairs/Upgrades				
Conventional plant electrical upgrade	Electrical system at conventional water treatment plant require replacement	300,000	100%	0%
Conventional plant valve replacement	Flow control valves at conventional water treatment plant require replacement	75,000	100%	0%
FCV #3 Modification (relocation of tank outlet)	The flow control valve #3 overly restricts water flow from the plant and will be relocated	100,000	100%	0%
Enhanced treatment process	Enhancements at treatment plant to meet higher water quality standards	750,000	47%	53%
Conventional plant filter media replacement	The treatment media at the conventional water treatment plant is due for replacement and upgrade	125,000	47%	53%
Acid addition system	Project to upgrade treatment to allow for acid addition during treatment process	175,000	47%	53%
Water system SCADA	Supervisory Control and Data Acquisition system allows for remote sensing and control of water system.	300,000	47%	53%
Other				
Integrated Water Management Plan - Phase I and II	Long-range planning project that allow the City to develop comprehensive technical plan for entire water system	500,000	47%	53%
Corp yard improvements	Project to replace the City Corporation Yard, which lies in the floodplain and is subject to disruption in emergency situations	5,000,000	47%	53%
		\$69,984,408	\$7,304,154	\$62,680,254

**City of American Canyon**  
**Wastewater Enterprise Capital Improvement Program Summary**

Project Name	Project Description/Need	Projected cost and financing		
		Cost	Ratepayers	Development
Pump station upgrades Phase 1	Pumps replaced to handle increased wastewater flows	\$320,000	0%	100%
Wellands Edge Rd force main upgrade	Critical project required to replace and upgrade force main which carried 90% of wastewater flow in City	2,100,000	67%	33%
Zenon cassette	Additional cassettes to increase wet weather flow capacity	887,631	67%	33%
Phase 1 treatment Upgrades (1)	Increases capacity from current 1.9 mgd to 2.5 mgd	3,000,000	0%	100%
Phase 2A treatment upgrades (2)	Increases capacity from 2.5 mgd to 2.75 mgd and lays foundation for future expansions	6,600,000	0%	100%
Phase 2B treatment upgrades (3)	Increases capacity from 2.75 mgd to 3.75 mgd to meet General Plan requirements	10,950,000	0%	100%
Sedge pond #2 liner replacement	Liner in Pond #2 must be replaced	1,200,000	100%	0%
WWTP electrical system repair	Existing electrical system in plant must be repaired and upgraded	1,200,000	80%	20%
Wastewater system SCADA	System for monitoring and controlling the wastewater treatment system	300,000	67%	33%
IWMP (50%)	Long-range planning project that allow the City to develop comprehensive technical plan for entire water system	500,000	0%	100%
III Reduction	Program that reduces wet weather infiltration into sewer pipes which improves function of wastewater treatment plant	6,000,000	10%	80%
Force main addition (Sunsat to WWTP)	Second forcemain required to bring wastewater flows to treatment plant to meet buildout flow levels	3,000,000	0%	100%
Corp yard Improvements	Project to replace the City Corporation Yard, which lies in the floodplain and is subject to disruption in emergency situations	5,000,000	67%	33%
Lombard pump station	New pump station required to meet planned flows in northeastern portion of City	2,500,000	0%	100%
Main pump station replacement	Project to replace the Main Pump Station to meet code requirements when expanded	2,000,000	0%	100%
Broadway & American Canyon Road Sewer Upsizing	Gravily sewers along Broadway from Donaldson Way and American Canyon Rd. must be upsized to handle increased flows	2,100,000	0%	100%
Broadway & S. Napa Jct. Rd. Sewer Upsizing	Gravily sewers along Broadway from Napa Jct. Rd. to Donaldson Way must be upsized to handle increased flows	700,000	0%	100%
Upgrade Green Island Pump Station	Pump station must be expanded to handle increased industrial flows from Green Island area	250,000	0%	100%
		\$40,607,631	\$8,312,713	\$40,294,918

**APPENDIX C**  
**WATER DEMAND CALCULATIONS**

# City of American Canyon Will Serve Questionnaire

Date: <u>AUGUST 20, 2008</u>	
Owner Name: <u>NAPA GATEWAY PARTNERS LLC</u>	Applicant Name: <u>CARY GRIVES</u>
Owner Address: <u>4202 DOUGLAS BLVD #100</u> <u>GRANITE BAY, CA 95746</u>	Applicant Address: <u>→ SAME</u>
Owner Phone #: <u>916-774-7000</u>	Applicant Phone #: <u>916-774-7000</u>
Owner Signature: <u>[Signature]</u>	Project Engineer: <u>TLA - PATRICK LONGTIN</u>
Project Name: <u>GREENWOOD COMMERCIAL CENTER</u>	Project Address: <u>1528 EUREKA RD #100</u> <u>ROSEVILLE, CA 95661</u>
Project APN: <u>057-210-055</u>	
Project Description: <u>374,926 SF OF INDUSTRIAL WAREHOUSE IN 3 BUILDINGS ON 19 ACRES</u>	
Permit Number: <u>NOT ASSIGNED</u>	Time of Operation:
Status of Environmental Clearance: <u>PENDING W/ NAPA</u>	hours/day: <u>10</u>
Permit Status: <u>PENDING</u>	days/week: <u>5 (6 IN LATE SUMMER)</u>
Land Use: <u>INDUSTRIAL PARK</u>	months/year: <u>12</u>
Property Zoning: <u>IP</u>	
Lot Size (acres): <u>CURRENTLY 19 AC-</u>	Building Size (sqft): <u>374,926</u>

## Anticipated Potable Water Demand\*

Average day demand (annual):	Maximum day demand:
domestic <u>1000</u> gpd	domestic <u>2000</u> gpd
irrigation <u>0</u> gpd	irrigation <u>0</u> gpd
industrial <u>100</u> gpd	industrial <u>400</u> gpd
Total <u>1100</u> gpd	Total <u>2400</u> gpd

\* attach references used and calculations for water demand

The City of American Canyon Municipal Code 13.10 (Code) gives first priority for new water and sewer connections and services to residences and businesses located within the city corporate boundary. The Code states the City shall provide water and sewer connections and services to other residences and businesses located within the urban limit line of the city only after one of the following two conditions has occurred; upon annexation to the city and the district, where that has not already occurred; or upon securing a revenue sharing agreement involving the county, the city and where applicable the district. The Code also states the City may provide water service to developments outside of the city urban limit line but within the water service area of city, as available, provided the applicant agrees to an "in lieu of" revenue-sharing agreement with city.

If outside the corporate city boundary please describe how you intend to address the provisions of the Code.

APR 25 2008



Greenwood Commerce Centre  
Gary Graves e-mail dated 8/20/08

8/20/08

- 1) warehouse = 375,000 sq.
- 2) 8% office = 30,000 sq.
- 3) max number of bathrooms equal  
20 for all three buildings
- 4) 40 gpd on average for each bathroom
- 5) 20 bathrooms  $\times$  40 gpd = 800 gpd.

Round-up to 1,000 gpd to include  
Kitchen & incidental water use.

---

- 1) warehouse = 375,000 sq.
- 92% warehouse space = 345,000 sq.

Est 100 gpd - incidental use

CAB

**APPENDIX D**

**WATER CAPACITY CAPITAL PROGRAM SCHEMATIC**

# City of American Canyon

## Capacity Fee Capital Program Schematic

