

Town of Yountville

**Recycled Water Program Manual
and Notice of Intent**

for compliance with:
San Francisco Bay
Regional Water Quality Control Board
General Water Reuse Order No. 96-011

April 2004
(updated February 2006)

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Town of Yountville

Recycled Water Program Manual And Notice of Intent

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Appendices

A Program Authority

User Agreement for the Purchase and Sale of Reclaimed Water
(sample language)

B Recycled Water Program Forms

- (1) Application for Recycled Water Use Permit
- (2) Recycled Water Use Permit and
Additional Terms and Conditions
- (3) Recycled Water Users Self-Monitoring Report
- (4) User Site Inspection Report
- (5) Significant Violation Report
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- (7) Tanker Truck Recycled Water Use Permit

C Cross-Connection Control Program

- (1) Letter to Users Requiring Cross-Connection Control Investigation
and Backflow Prevention Device Testing
- (2) List of A.W.W.A. Certified Cross-Connection Control Specialists
in the Yountville Area
- (3) Cross-Connection Control Investigation and Test Report
- (4) Backflow Prevention Assembly Test Report

D Order No. 96-011

General Water Reuse Requirements for Municipal
Wastewater and Water Agencies

E Recycled Water Program Engineering Report

Town of Yountville

Recycled Water Program Manual And Notice of Intent

The Town of Yountville has operated a recycled water program during the irrigation season since 1988. Previous operation was regulated under San Francisco Bay Regional Water Quality Control Board (Water Board) Order No. 89-074. The source of the wastewater is the Town of Yountville/Veterans Home of California Joint Wastewater Treatment Plant (Joint Treatment Plant). Numerous operational changes have been made since issuance of Order No. 89-074 and additional users have petitioned to be included in the recycled water program. In the process of updating the existing Order with these changes, the Town of Yountville decided to submit this Program Manual as an NOI to be included in the General Water Reuse Permit (Order No. 96-011). For purposes of identifying all of the entities in this Program Manual, the Town of Yountville will be referred to as the “Producer” and the all permitted users of the recycled water will be referred to as the “Users.”

The following sections include information on the quality and quantity of recycled water produced by the Joint Treatment Plant, identification of all permitted Users and uses of the recycled water, and a description of the authority and operation of the Recycled Water Program.

I FACILITY/WASTE TREATMENT INFORMATION

The Joint Treatment Plant treats domestic wastewater from the Town of Yountville and the Veterans Home of California. The facility provides secondary treatment at a capacity of 0.55 mgd (average dry weather flow design). During wet weather, the wastewater treatment facility can treat up to 2.0 mgd. The treatment process consists of an aerated grit chamber, communitation, primary settling basin, primary trickling filter, intermediate settling basin, secondary trickling filter, aeration basin, final sedimentation, filtration, chlorination, and dechlorination. A schematic flow diagram of the Joint Treatment Plant is presented in **Figure 1**. After treatment, the flow is discharged to the Napa River (during the wet season only) or stored in the 2.5 mgal effluent storage pond. A flow equalization pond (3.5 mgal capacity) is also operated at the treatment facility. Flow can be diverted to this pond after the primary settling basin and after the final clarifier to manage the flowstream during wet weather periods.

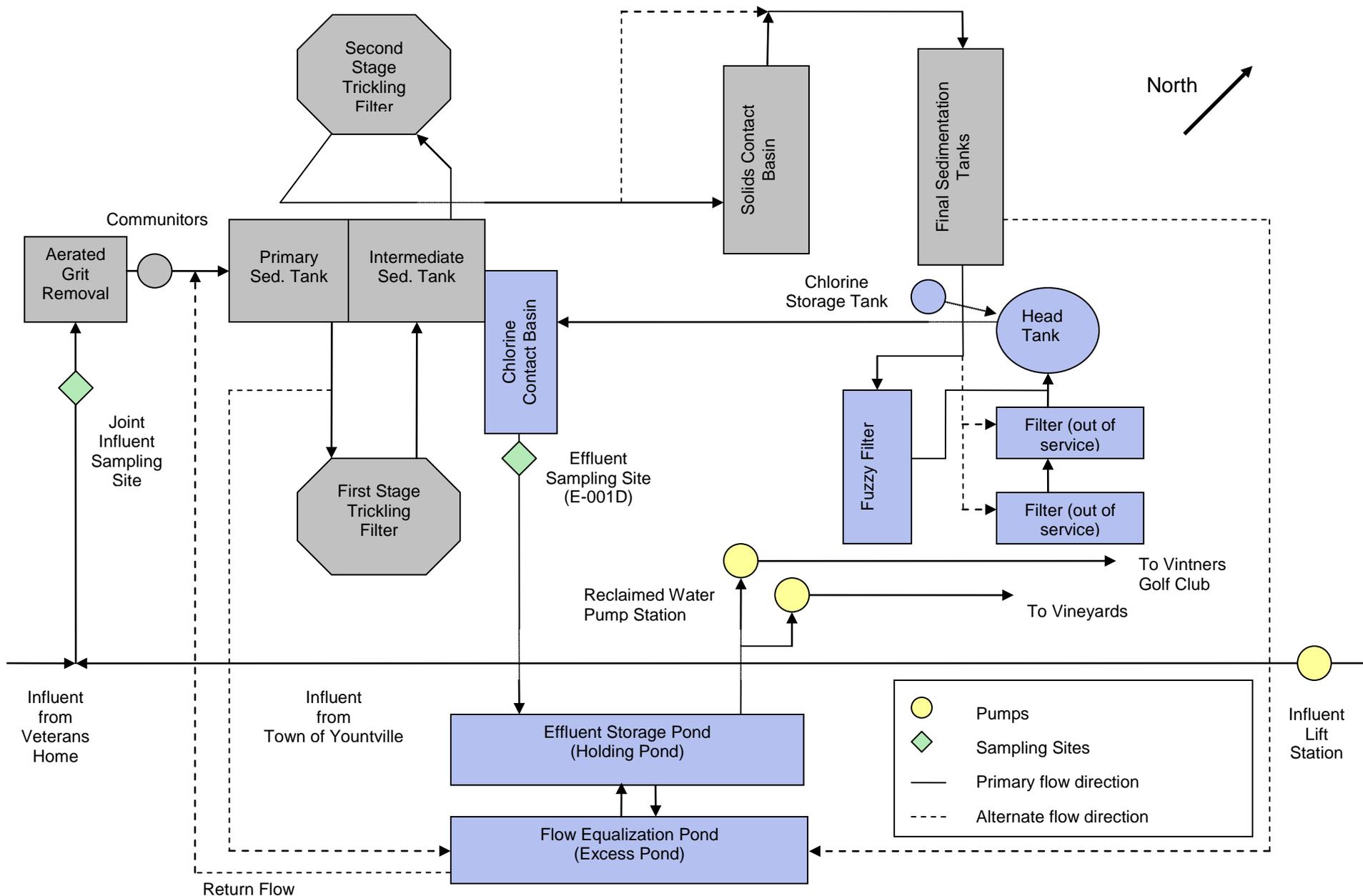


Figure 1. Town of Yountville/Veterans Home Joint Wastewater Treatment Plant Process Flow Schematic

From October 1st to May 15th, discharge is permitted to the Napa River (NPDES Permit No. CA0038121). During the remainder of the year, the stored effluent is diverted through the reclaimed water pump station for irrigation of a local golf course and area vineyards. Depending on User requirements, plant operators attempt to start the dry season with a full storage pond in order to have sufficient recycled water available for summer irrigation demands. The average flow from the Joint Treatment Plant during the land application period (May 16th to September 30th) is currently 0.40 mgd. The recycled water distribution system is depicted in **Figure 2**, along with the locations of the existing Users. Diversion valves and water meters are located at each delivery point to measure the amount of water delivered to each User. An extension of the existing distribution system will be required when several proposed Users enter the Recycled Water Program. The locations of the proposed Users are also shown in **Figure 2**.

Treated effluent from the Joint Treatment Plant currently meets the minimum standards for Disinfected Secondary-2.2 Recycled Water. The total coliform levels are no greater than 2.2 MPN/100mL, as determined from the median value of samples collected over the previous seven days, and a maximum value of 30 MPN/100mL is not exceeded in more than one sample in any 30-day period. The effluent is adequately oxidized, dissolved oxygen concentrations are greater than 1 mg/L, and dissolved sulfide concentrations do not exceed 0.1 mg/L. The Producer is pursuing a permit for restricted access golf course irrigation and drip irrigation of vineyards. Secondary-2.2 Recycled Water is appropriate for these uses as indicated in Title 22 of the California Code of Regulations.

II REUSE APPLICATIONS

Recycled water is used for golf course irrigation on Veterans Home property and at offsite locations by contracted Users. A list of the current and proposed Users, their recycled water uses, and the approximate amount of recycled water utilized by each is presented in **Table 1**. The locations of the Producer, the distribution pipeline, and the User sites are shown in **Figure 2**. User operations are described in the following paragraphs. Several additional vineyards and wineries have expressed interest in receiving recycled water. As the Recycled Water Program is developed and the recycled water supply and demand is more accurately defined, some or all of these Users will be permitted and added to the program.

**Table 1. Town of Yountville Recycled Water Program
Existing and Proposed Recycled Water Users**

Recycled Water User	Designated Use	Irrigation System	Irrigated Area (acres)	Average Volume of Water Used (mgal/yr)
Vintners Golf Club	Golf course irrigation, ornamental ponds	Sprinklers	51 (golf course) 8 (non-landscaped) ^a	25 ^b
Chimney Rock	Vineyard irrigation	Drip	137	27 ^b
Clos du Val Winery	Vineyard irrigation	Drip	152	12 ^b
Stag's Leap Vineyards	Vineyard irrigation	Drip	269	14 ^b
Hartwell Vineyards (proposed)	Vineyard irrigation	Drip	Not available	0.075 ^c (to be used in Sept-Oct only)
Robert Mondavi Vineyards (proposed)	Vineyard irrigation	Drip	Not available	To be negotiated
Pineridge Winery (proposed)	Vineyard irrigation	Drip	Not available	To be negotiated
Silverado Vineyard (proposed)	Vineyard irrigation	Drip	Not available	To be negotiated

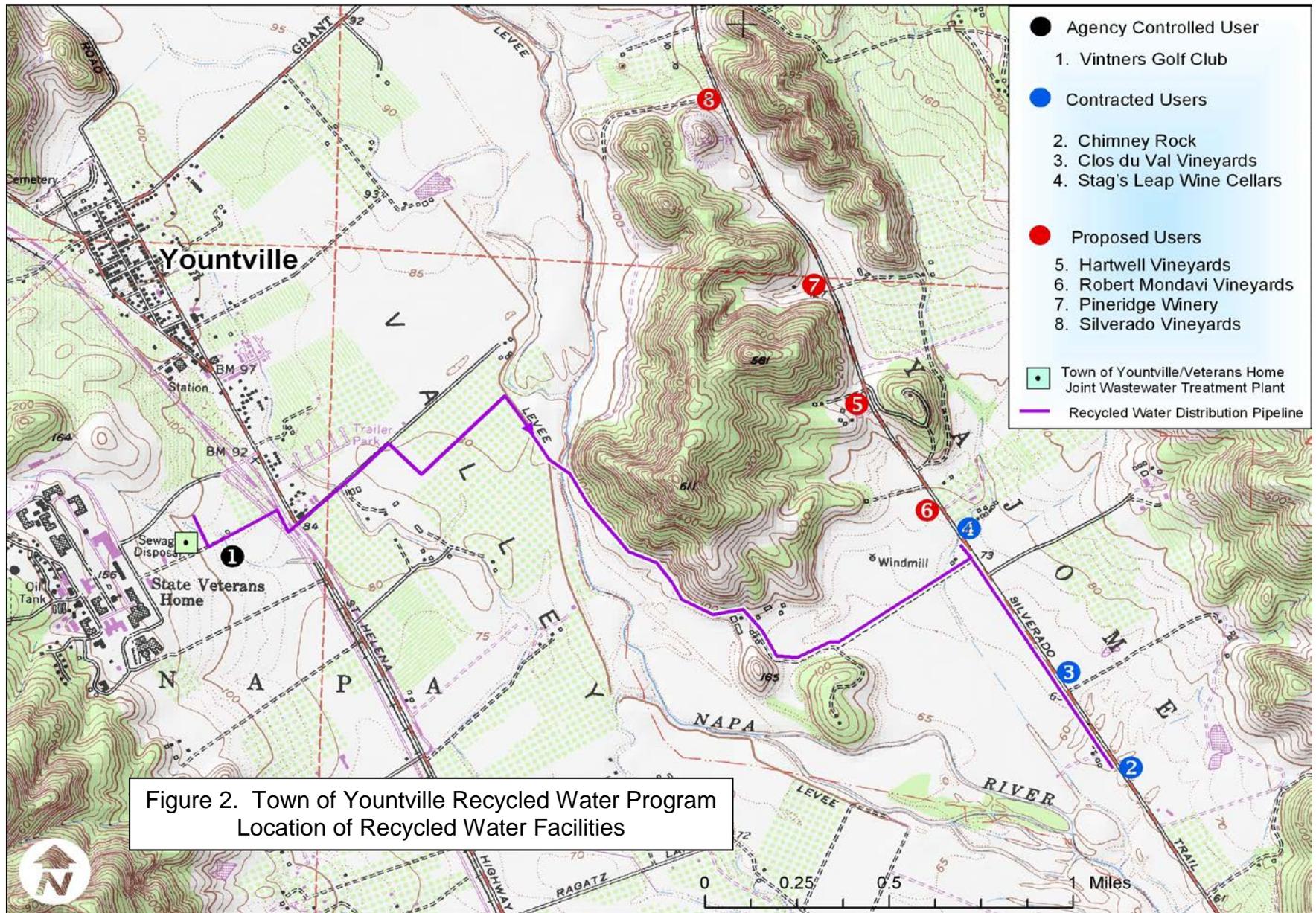
^aDesign values (Yountville Associates, 1998)

^bAverage use based on water supplied during the 2000 to 2003 irrigation seasons (Moore, 2004)

^cPredicted water use (Hartwell, 2000).

Agency Owned or Controlled Recycled Water Users

The Vintners Golf Club, located on Veterans Home property, is currently the only Agency Controlled User in the Recycled Water Program. The company that manages the golf club leases the land from the State of California, Department of Veterans Affairs, which owns and operates the Veterans Home. The Department of Veterans Affairs owns half of the Joint Treatment Plant.



Vintners Golf Club

Recycled water has been applied to approximately 60 acres of land adjacent to the Veterans Home and the Joint Treatment Plant since the treatment plant was constructed in 1977. This area is owned by the State of California and was included in the previous water reuse permit (Order 89-074). However, at that time the area was cultivated with hay and spray irrigated with recycled water. In 1994, the State of California leased the property to the R.B. Imo Corp. for development as a golf course. The Vintners Golf Club opened in 1998 and includes a 9-hole public golf course, driving range, clubhouse/ restaurant, parking lot, and three ornamental storage ponds. A site map of the golf club is presented as **Figure 3**. The Vintners Golf Club surrounds the Joint Treatment Plant and is located directly east of the Veterans Home. The term of the lease extends 30 years from the opening date of the golf course facility. Under lease conditions, the lessee is entitled to a volume of recycled water equal to the amount of wastewater produced by the Veterans Home (State of California, 1994). Recycled water is made available from the Joint Treatment Plant to the Vintners Golf Club as needed during the land application period. There is no fee to the lessee for this recycled water supply.

The golf course uses approximately 25 million gallons per year of recycled water for sprinkler irrigation of the greens and other landscaped areas. Peak usage can be as high as 0.28 mgd (measured during June, 2003). Irrigation is done at night, during the early morning hours, or during the days when the golf course is closed to avoid contact with the general public. The grounds are given maximum opportunity to dry before being used by the golfers and well water is used for irrigation of the clubhouse/restaurant area. Occasionally, as needed by the Producer, the golf course will accept additional recycled water and use it to irrigate the surrounding non-landscaped areas. Recycled water is used to fill the three decorative ponds located within the fairways. The irrigation system is supplied by pumps located in the ponds and can also be supplemented by onsite well water. The total volume of the ponds is 25 ac-ft and they are lined to prevent infiltration. The ponds do not contain any fountains and are not used for any recreational purposes.

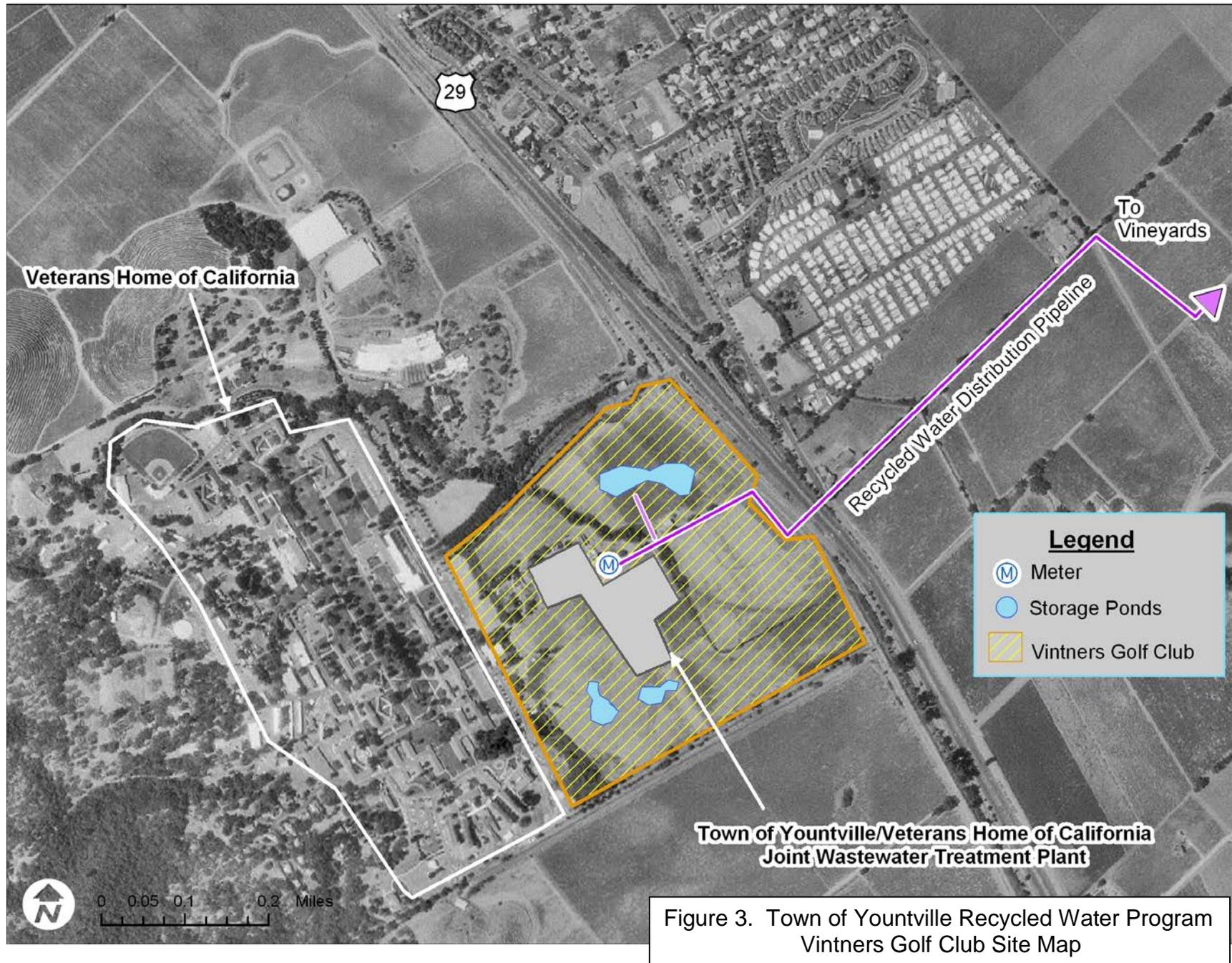


Figure 3. Town of Yountville Recycled Water Program Vintners Golf Club Site Map

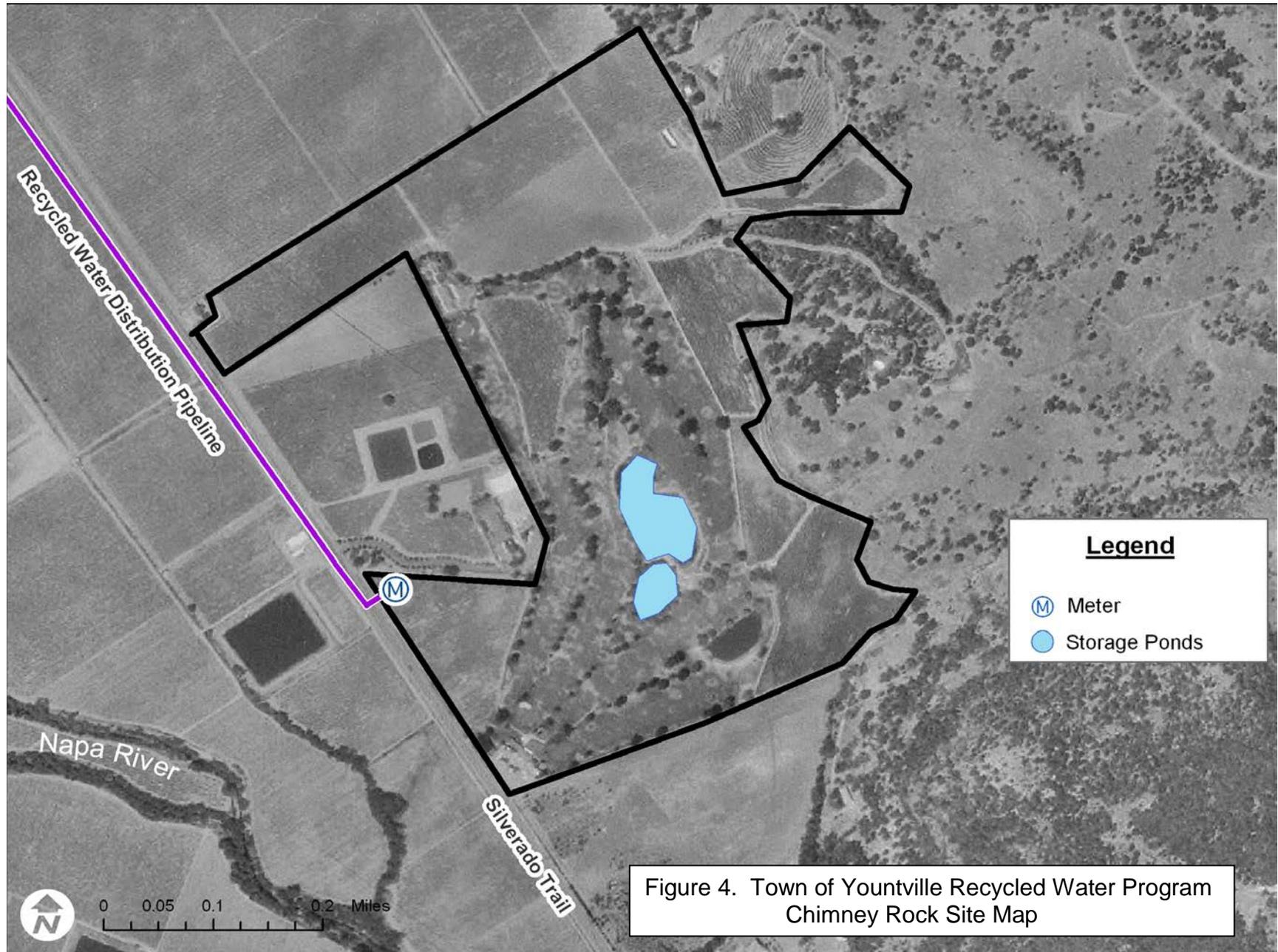
Contracted Recycled Water Users

The contracted Users described below have signed agreements with the Producer to purchase recycled water for irrigation use. Prior to the establishment of this Recycled Water Program, the Users were complying with the reuse requirements specified in Order No. 89-074. Now that the Town of Yountville program is approved under Order No. 96-011, the Users are being permitted by the Producer to ensure compliance. The transition to the new permit is mandated in the Recycled Water User Agreement (**Appendix A**).

Chimney Rock (CRP Associates, LLC)

The Chimney Rock site has been utilizing recycled water from the Town of Yountville since 1979 and was included in the original water reuse permit (Order No. 89-074). At that time, the recycled water was used to spray irrigate a 9-hole golf course. CRP Associates purchased the 137 acre site in 1999 and removed the golf course. A winery and vineyards are now located on the site and additional vineyards and other improvements are planned. Chimney Rock is located approximately 4 miles east of the Joint Treatment Plant (see **Figure 1**). A map of the Chimney Rock site is presented as **Figure 4**. In the User Agreement negotiated between CRP Associates and the Producer, Chimney Rock is guaranteed a base allocation of 88,000 gallons per day of recycled water during the months of June, July, August, September, and October (Town of Yountville, 2003). If the supply is sufficient, Chimney Rock may request additional water not exceeding 21 million gallons per calendar year. An annual metering charge is assessed and there is a unit cost for each 10,000 gallons of recycled water delivered.

Chimney Rock uses approximately 27 million gallons of recycled water per year to drip irrigate wine grapes. Peak use can be as high as 0.21 mgd (measured during October, 2003). The recycled water is stored onsite in two storage ponds prior to use. One pond has a capacity of 30 acre-ft and the other has a capacity of 4.8 acre-ft. Chimney Rock uses a portion of the smaller pond to treat process wastewater from their winery. A baffle separates the pond into 2 sections. At the south end, there is a 300,000 gallon aeration zone to receive winery wastewater. After treatment, the effluent is allowed to mix with the Town of Yountville recycled water in the remaining area of the pond. The combined wastewater is used to irrigate the vineyards.



Clos Du Val Vineyards
(Clos Du Val Wine Company, Ltd. And Regusci-Simone Ranch Limited Partnership)

Recycled water is used at the Clos du Val Vineyards to irrigate four separate parcels of vineyards. Two of the parcels are owned by the Regusci-Simone Ranch Partnership and comprise 120 acres. The other two parcels are owned by Clos Du Val Wine Company and Clos Du Val Vineyards and comprise 32 acres. The general location of the parcels is identified in **Figure 2** and the site map is presented as **Figure 5**. The Regusci parcels are located approximately 3 miles east of the Joint Treatment Plant along the northwestern boundary of Chimney Rock. The land is leased to Clos Du Val Vineyards and contains vineyards, related improvements, and an irrigation pond. The Clos Du Val parcels are located approximately 4 miles from the Joint Treatment Plant and are nearly surrounded by the Chimney Rock site. A winery, vineyard, and additional irrigation pond are located on the Clos du Val parcels. All four parcels are operated by Clos du Val Vineyards. In the User Agreement negotiated with Clos Du Val and the Producer, the User is guaranteed a base allocation of 85,000 gallons of recycled water per day during the months of June, July, August, September, and October (Town of Yountville, 2003). If additional water is available, Clos Du Val can request up to a maximum of 25 million gallons per calendar year. A fee is assessed monthly for metering and there is a unit cost per 10,000 gallons of recycled water received.

Clos Du Val uses approximately 12 million gallons of recycled water per year to drip irrigate wine grapes. Peak use can be as high as 0.21 mgd (measured during August, 2002). The recycled water received by the vineyards is first directed to an irrigation pond on the Regusci Parcels which has a total capacity of 49.5 ac-ft.

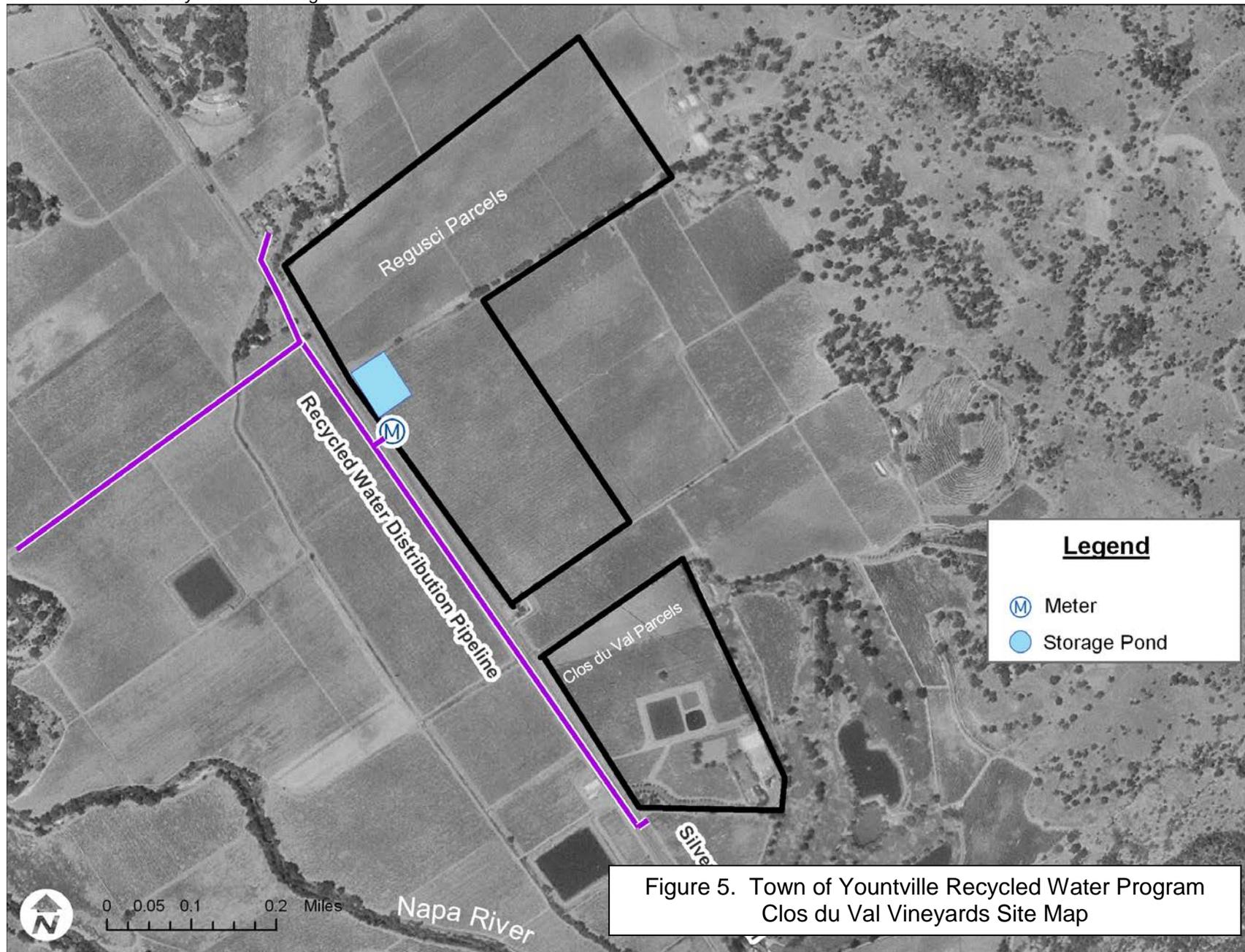


Figure 5. Town of Yountville Recycled Water Program
Clos du Val Vineyards Site Map

Stag's Leap Wine Cellars
(Stag's Leap Vineyards, the Winiarski Trust, and Rainbowday, LLC)

Stag's Leap Wine Cellars manages and operates 9 parcels, comprising 269 acres of vineyards. The land is owned by Stag's Leap Vineyards, the Winiarski 1989 Revocable Trust, and Rainbowday, LLC. The parcels are contiguous and are located approximately 3 miles east of the Joint Treatment Plant and directly northwest of the Regusci Parcels (see **Figure 1**). The site contains vineyards, related improvements, and an irrigation pond. A site plan for Stag's Leap Wine Cellars is presented as **Figure 6**. In the User Agreement negotiated between Stag's Leap and the Producer, the User is guaranteed a base allocation of 88,000 gallons of recycled water per day during April, May, June, July, August, September, and October (Town of Yountville, 2003). If the supply is available, Stag's Leap can request additional water up to a maximum of 25 million gallons per calendar year. A fee is assessed monthly for metering and there is a unit cost per 10,000 gallons of recycled water received.

Stag's Leap uses approximately 14 million gallons of recycled water per year to drip irrigate wine grapes. Peak use can be as high as 0.14 mgd (measured during September, 2003). The recycled water delivered to the vineyard is first directed to an onsite irrigation pond. This pond has a capacity of 5.5 acre-ft.

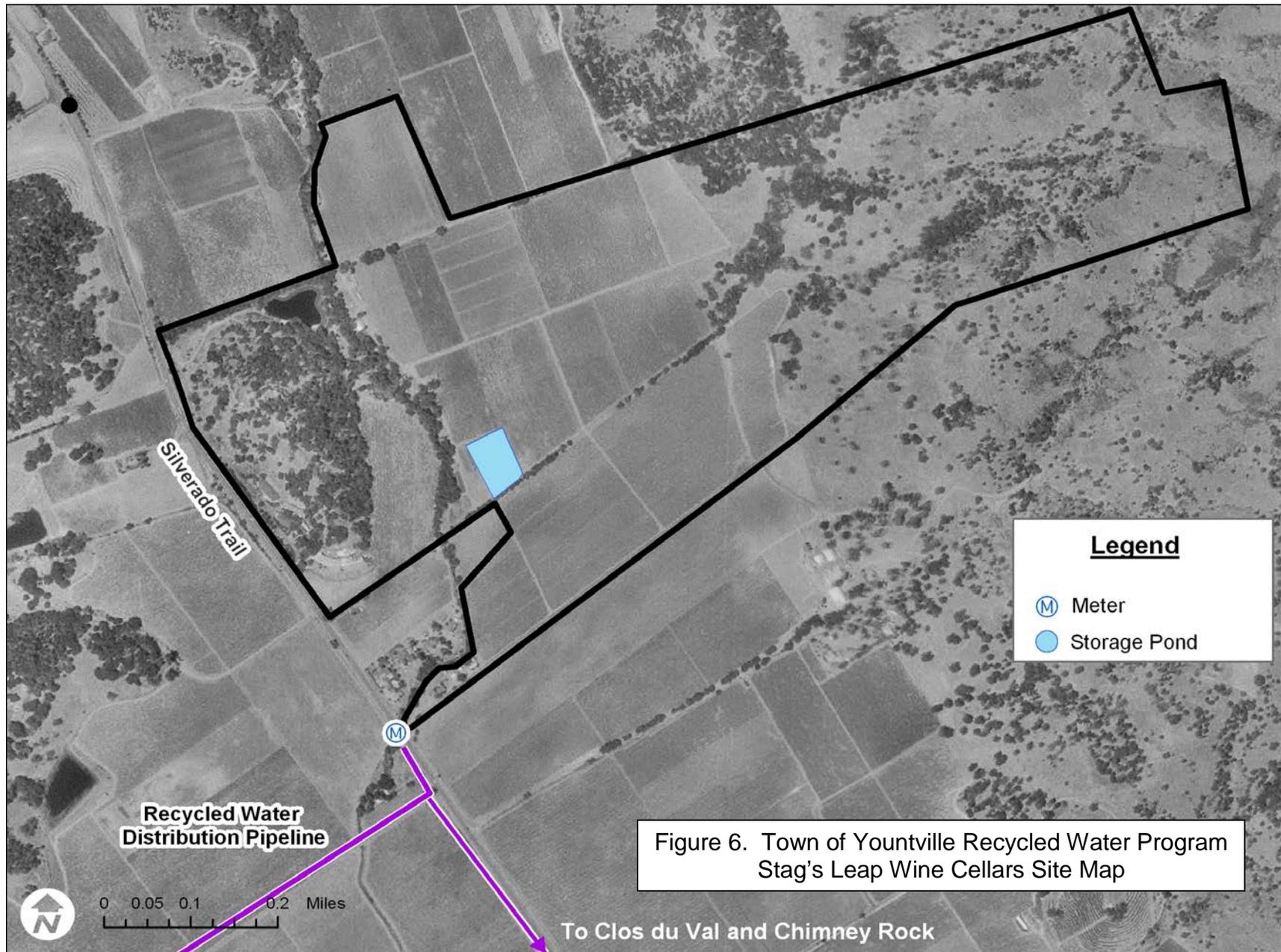


Figure 6. Town of Yountville Recycled Water Program Stag's Leap Wine Cellars Site Map

Proposed Recycled Water Users

There are four users that do not have access to recycled water currently, but are interested in receiving recycled water in the future. The users are listed below and the site locations are shown in **Figure 2**. Hartwell Vineyards has started planning for a distribution pipeline extension and has requested a specific amount of water. The other users are interested in sharing whatever amount of recycled water is available after the current contracted Users have received their share. Once the pipeline extension is in place and User Agreements have been finalized, the Producer will begin the permit process to include them in the Town's Recycled Water Program.

- *Hartwell Vineyards* – The recycled water would be used for drip irrigation of vineyards. The Hartwell facility is under construction and the management company is interested in receiving recycled water in the next couple years.
- *Robert Mondavi Vineyards* – The recycled water would be used for drip irrigation of vineyards. Existing vineyards are ready to receive recycled water as soon as a pipeline extension is completed.
- *Pineridge Winery* – The recycled water would be used for drip irrigation of vineyards. Existing vineyards are ready to receive recycled water as soon as a pipeline extension is completed.
- *Silverado Vineyards* – The recycled water would be used for drip irrigation of vineyards. Existing vineyards are ready to receive recycled water as soon as a pipeline extension is completed.

III DESCRIPTION OF THE RECYCLED WATER USE PERMIT PROGRAM

The Producer is implementing a permit program to ensure that the recycled water is safely and legally applied at the irrigation sites. The program is described in the following paragraphs in terms of the Producer's authority, the program design, the monitoring and reporting procedures, and the methods used to ensure regulatory compliance.

Agency Authority and Regulations

The Town of Yountville has negotiated Reclaimed Water User Agreements with each of the contracted Users (a sample user agreement is located in Appendix A). Included in each agreement is a statement that "the User shall comply with all of the provisions and requirements of Order 96-011." The specific requirements for recycled water use, excerpted from the regulations, will be provided to the Users when they receive their Recycled Water Use Permit. By signing the Agreements, the Users acknowledge that the water received is

reclaimed wastewater and the use of which is subject to specific regulatory requirements. The appropriate uses of the recycled water and the approved use areas are indicated in the Agreement. If the Users do not comply with the regulations cited, the Agreements are null and void and the Producer may choose to shut off the supply of recycled water.

To make the Users aware that the regulations and program requirements may change in the future, a provision is included in the Agreements that states: “changed requirements and conditions, including new or amended reclaimed water orders, may be imposed on the Producer by the Water Board, or any other department, authority, or agency having legal jurisdiction over Producer, which may cause Producer to change the terms and conditions of this Agreement regarding the purchase and usage of reclaimed water by the User.”

The company leasing property for the Vintners Golf Club does not have a User Agreement with the Producer. The lease was negotiated with the State of California and includes a provision that “the Lessee shall comply with all applicable regulations pertaining to the discharge of effluent during the Term of this Lease and subject to the provisions of this Lease.” The lessee will be included in the permit program and will receive pertinent information on recycled water use as part of the permit conditions.

Design and Implementation of the Recycled Water Use Permit Program

The Producer will implement a permit system in order to regulate the recycled water Users. As part of the permit system, administrative procedures will be developed to ensure compliance with Order No. 96-011 and Department of Health Services reuse criteria. There are two types of Users that will be permitted under the Recycled Water Use Program, “Metered Recycled Water Users” and “Trucked Recycled Water Users.” Metered Recycled Water Users are those users that are connected to the recycled water distribution pipeline. Trucked Recycled Water Users are owners/operators of tanker trucks that periodically fill-up their trucks at the Joint Treatment Plant and use the recycled water for dust suppression or pesticide/herbicide dilution. The two types of permits and the process for obtaining the permits are described in the following paragraphs.

Permit System for Metered Recycled Water Users

The steps that will be taken to issue and maintain a permit for the metered recycled water users are described in **Table 2**. Existing recycled water users (users that already have an approved User Agreement) will be permitted as soon as the program is approved by the Water Board. These Users will be required to complete a permit application, but will essentially start the permit process at Step 5. The proposed Users, and any other Users joining the program in the future, will start the permitting process at Step 1.

**Table 2. Town of Yountville Recycled Water Program
Permitting Process for Metered Users**

Process of Issuing and Maintaining a Metered Recycled Water Use Permit	Applicable Recycled Water Program Document or Actions Required	Responsible Entity
<u>New User Starting Point</u> <i>Step 1</i> - Submit application for permit	Application for Recycled Water Use Permit (Appendix B)	User
<i>Step 2</i> - Identify distribution issues, verify designated uses, estimate quantity of water and delivery schedule	Verification of information provided in the permit application	Producer
<i>Step 3</i> - Draft legal agreement between the User and Producer (may already exist for some Users)	User Agreement for Purchase and Sale of Reclaimed Water (Sample, Appendix A)	Producer/User
<i>Step 4</i> - Approve User Agreement	Present Agreement to Town Council for approval	Producer, Town Council, User
<u>Existing User Starting Point</u> <i>Step 5</i> - Provide materials and/or training to User on proper operation of a recycled water system	CCR Title 17 and Title 22, Recycled Water Program Manual, Order No. 96-011	Producer
<i>Step 6</i> - Perform initial cross-connection and backflow prevention device testing	Cross-Connection Investigation and Testing Report (App. C) Backflow Prev. Assembly Test Report (App. C)	User
<i>Step 7</i> - Issue permit (signed by User and Producer)	Recycled Water Use Permit and Permit Terms and Conditions (App. B)	Producer
<i>Step 8</i> - Perform periodic monitoring and inspections	User Self-Monitoring Report (App. B)	User
	User Site Inspection Report (App. B)	Producer
<i>Step 9</i> - Perform annual cross-connection investigation and backflow prevention device testing	Cross-Connection Investigation and Backflow Prev. Assembly Test Report (App.C)	User
<i>Step 10</i> - Renew Permit (every 5 years)	Recycled Water Use Permit (App. B)	Producer

All metered users must complete an Application for Recycled Water Use Permit (Appendix B). The information to be disclosed in the application includes:

- site layout;
- plans to combine the reclaimed water with other water sources (e.g., well water, winery process wastewater);
- proposed uses of the water (landscape irrigation, crop irrigation);
- operation of onsite recycled water storage facilities;
- procedures for cross-connection control; and
- identification of a Recycled Water Supervisor.

The Recycled Water Supervisor will be the Recycled Water Program contact person at the User site and the person responsible for day-to-day operation of the recycled water system. The designated individual will have complete knowledge of the storage/irrigation system and will be available at all times to respond to emergencies or calls for assistance from the Producer.

The Producer will verify the information provided in the application through a site visit and discussions with the potential User. Any distribution and cost issues will be resolved by the User and Producer and incorporated into a User Agreement for the Purchase and Sale of Reclaimed Water. This agreement will be drafted by the Town attorney, approved by the Town Council and signed by the Town Administrator and User representatives. The materials needed to safely operate and maintain a recycled water system will be provided to the User during the permit adoption process. These materials will include, but not necessarily be limited to, CCR Titles 17 and 22, Order No. 96-011, and the Yountville Recycled Water Program Manual.

The Recycled Water Use Permit will be issued to a metered user only after completion of a Cross-Connection Control Investigation and Test to identify and remove any connections between recycled and potable water supplies (see the following section for more information). The Producer will review the investigation and test results to ensure that the necessary repairs are made before issuing the Permit. Attached to the Permit will be the Permit Terms and Conditions. The conditions will include specific monitoring sites and frequencies assessed for the User's Self-Monitoring Program, copies of the applicable regulations, and any site-specific permit conditions that may be necessary. The Producer will assess compliance with permit conditions upon reissuance of the Recycled Water Use Permit every 5 years.

Permit System for Trucked Recycled Water Users

The process for obtaining a permit for trucked recycled water use is presented in **Table 3**. Individual owners of tanker trucks, as well as truck operators, must have a permit to fill-up with recycled water. Each truck driver is required to carry

a copy of the Trucked Recycled Water Use Permit and make the permit available for inspection upon request.

**Table 3. Town of Yountville Recycled Water Program
Permitting Process for Trucked Recycled Water Users**

Process of Issuing and Maintaining a Trucked Recycled Water Use Permit	Applicable Recycled Water Program Document or Actions Required	Responsible Entity
<i>Step 1</i> – Request a Trucked Recycled Water Use Permit	Contact the Wastewater Systems Supervisor and provide applicable information	Truck Driver or Trucking Company Representative
<i>Step 2</i> – Issue a “Conditional” Trucked Recycled Water Use Permit (30 day expiration)	Trucked Recycled Water Use Permit (Appendix B) Verify information provided	Producer
<i>Step 3</i> – Receive a “Final” Trucked Recycled Water Use Permit	Pay annual fee at Town Hall and receive a permit number and signed copy	Truck Driver or Trucking Company Representative
<i>Step 4</i> – Permitted access to recycled water pump station at the Joint Treatment Plant for one year (unlimited number of fill-ups)	Trucked Recycled Water Release Log (Appendix B) Complete a log entry at the pump station every time recycled water is collected.	Truck Driver
<i>Step 5</i> – Follow regulations for recycled water use	Recycled Water User Guidelines (Appendix B)	Truck Driver
<i>Step 6</i> – Renew permit annually	Trucked Recycled Water Use Permit (Appendix B)	Truck Driver or Trucking Company Representative

All trucked recycled water users must submit information to the Wastewater Systems Supervisor at the Joint Treatment Plant to receive a Trucked Recycled Water Use Permit. The information to be disclosed includes:

- Name of trucking company or operator;
- application method (release valve or spray);
- type of use (soil compaction, dust suppression, herbicide dilution, etc.)
- general application area (Sonoma County, Napa County, Town of Yountville);
- volume of recycled water authorized for pick-up each day;
- and identification of an Emergency Contact Person.

The Emergency Contact Person will be the person contacted by the Producer or the Water Board when needed to confirm adherence to the Recycled Water User Guidelines. The designated contact person must have knowledge of all truck activities and the particular use of recycled water. This person must also be available to respond to emergencies or calls for assistance from the Producer.

When a trucker picks up recycled water at the Joint Treatment Plant, Plant staff will make an entry into the Trucked Recycled Water Release Log. The entry will contain information on how much water was collected, the truck license number, and the site where recycled water will be applied. The Producer will verify the information provided in the log by periodic phone calls to the trucking company office and through weekly site inspections. Information pertinent to the use of this water (Recycled Water User Guidelines, **Appendix B**) will be distributed to all applicants. Improper use of recycled water could result in the repeal of a Trucked Recycled Water Use Permit. *The Town is currently looking into a type of "electronic card system" that will record what company filed their truck and how much water was taken. An application will be available at Town Hall for parties interested in receiving the card. Until the card system is installed, water truck operators will be required to apply for recycled water through the current procedures.*

Cross-Connection Control Program

The program to control cross-connections and maintain backflow prevention devices at the User sites is described below in terms of the activities required of the Users and the role of the Producer. The requirements listed in Title 17 of the California Code of Regulations will be mandated and enforced by annual site inspections and on-going permit conditions.

User Cross-Connection Control Activities

The User is responsible for periodic cross-connection control investigations, testing, and repairs. The specific activities and frequencies are identified in **Table 4**. The User must contract directly with an A.W.W.A. certified cross-connection control specialist to perform the required activities. (A list of local specialists is presented in Appendix C.) Prior to permit issuance (and every 5 years thereafter), the User must conduct a site investigation, test the recycled system to identify cross-connections, and test all backflow prevention devices (Parts I and II of the Cross-Connection Control Investigation and Test Report, Appendix C). The results of the testing process are recorded by the specialist on the City-provided forms and any deficiencies are noted along with the prescribed corrective actions.

**Table 4. Town of Yountville Recycled Water Program
Cross-Connection Control Activities**

Required User Action	Frequency	User Reporting
Investigate site to determine cross-connection potential and test the recycled water system to ensure that no cross-connections are present.	Prior to Recycled Water Use Permit issuance	Submit the Cross-Connection Control Investigation and Test Report to the Producer (Parts I and II).
Test all backflow prevention devices to determine if functioning properly.		Submit the Backflow Prevention Assembly Test Report to the Producer.
Investigate site to determine cross-connection potential. Test all backflow prevention devices to determine if functioning properly.	Annually (required by May 15th)	Submit the Cross-Connection Control Investigation Report to the Producer (Part I). Submit the Backflow Prevention Assembly Test Report to the Producer.
Test the recycled water system for cross-connections.	Every 5 years (or more frequently if necessary)	Submit the Cross-Connection Control Investigation and Test Report to the Producer (Parts I and II).

On an annual basis, a cross-connection control investigation is required along with the backflow prevention device testing (Part I of the Cross-Connection Control Investigation and Test Report, **Appendix C**). During the investigation, the specialist must inspect the recycled water equipment and interview the Recycled Water Supervisor to determine if any equipment changes have been made since the last inspection. If activities were conducted that could compromise the integrity of the potable water system, a cross-connection test may be performed and/or corrective actions prescribed.

Every year, the Producer will send a letter to each User detailing the testing requirements and deadlines. It will be the Users responsibility to contact a certified Cross-Connection Control Specialist to perform the investigation and testing and to submit the completed reports prior to the specified deadline.

Producer Cross-Connection Control Activities

The Producer administers the Cross-Connection Control Program by sending test notices to the Users, reviewing test results, and enforcing compliance. The Producer will ensure that Title 17 requirements are being met at each User site and that backflow prevention devices are installed at all potable water supply wellheads and connections to the Town water system.

On April 15th of each year, the Producer will send a letter to the Users with instructions for completing a cross-connection control investigation and backflow prevention device testing. Attached to the letter will be a list of local A.W.W.A. Certified Cross-Connection Control Specialists (a sample letter and contact list are included in Appendix C). A site inspection must be completed by a specialist within 30 days of the date of the letter. The User must submit completed reports to the Producer and correct any noted deficiencies before May 15th in order to start delivery of recycled water for the upcoming irrigation season.

The results of the User investigations and testing will be incorporated into the User's file and included in the Annual Report to the Water Board. If problems exist at a site, follow-up contacts or inspections will be conducted until it is determined that the prescribed corrective actions have been implemented. Cross-connection control testing is only required prior to permit issuance and at times of permit renewal. However, interim testing may be required if a User installs new equipment, significantly changes its water reuse operation, or a possible cross-connection is identified at the User site.

Monitoring and Reporting Program

To ensure public safety and operation of the Recycled Water Program within legal guidelines, periodic site monitoring will be conducted by the Users and the Producer. The results of the monitoring efforts will be reported to the Water Board annually and, if necessary, as events occur that violate permit requirements. The activities associated with the monitoring and reporting program are detailed in **Table 5** along with the required frequencies and the required methods of compiling and recording results.

User Self-Monitoring

As part of the terms and conditions of the Recycled Water Use Permit, the Users are required to perform observations of site conditions and verify proper operation of the recycled water distribution system. Monitoring locations are specified in the Recycled Water Use Permit. Both land sites and pond (impoundment) sites may be specified. The User will perform the observations on two occasions during the irrigation season and record the results in the User Self-Monitoring Report (**Appendix B**). A copy of the monitoring report must be submitted to the Producer within 30 days of the observations.

Although the User Self-Monitoring Reports are required on a twice-yearly basis only, User awareness must be continuous to note any violations of recycled water use requirements. The applicable requirements will be distributed to the Users as attachments to the “Recycled Water Use Permit– Additional Terms and Conditions” (see **Appendix B**). The requirements are summarized in the attachment entitled “User Guidelines” (also located in **Appendix B**).

If a permit violation is noted, the User must contact the Producer immediately by phone. (Refer to the section titled “Significant Violation Report” for a full description of the incident reporting process.) The User also has a responsibility to discuss any planned operational changes with the Producer prior to implementation. Depending on the nature of the changes, the Producer will inform the Water Board and may change the terms and conditions of the Recycled Water Use Permit.

**Table 5. Town of Yountville Recycled Water Program
Monitoring/Reporting Activities**

Monitoring/Reporting Activity (refer to section)	Responsible Entity	Frequency	Data Compilation and Recording
Conduct self-monitoring and submit results to the Producer (User Self-Monitoring)	User	Two times during the irrigation season	Complete a User Self-Monitoring Report (Appendix B)
Report “Significant Violations” to the Producer by phone immediately (Compliance Program)	User	As Needed	Record the time and date of the phone call and the circumstances of the violation
Contact the Water Board within 24 hrs of a “Significant Violation,” and follow-up within 15 days of the event (Significant Violation Reports)	Producer	As Needed	Complete a Report of Significant Violation (Appendix B)
Conduct periodic inspections of User sites (User Site Inspections)	Producer	At least Annually	Complete a Site Inspection Report (Appendix B)
Measure constituent concentrations and the amount of recycled water delivered to Users (Producer Self-Monitoring)	Producer	See Table 5 (based on the Self-Monitoring Program for Order No. 96-011)	Maintain a file that contains all constituent and flowrate data
Report data collected, inspection results, violations corrected, and program changes to the Water Board (Annual Reports)	Producer	Annually (by March 15 th)	Prepare and submit an Annual Report for each calendar year

Producer Monitoring

The Producer is responsible for the quality of recycled water leaving the Joint Treatment Plant and the permitted use of the recycled water at the User sites. Samples of flow from the Joint Treatment Plant are collected and analyzed to assess regulatory compliance and treatment plant operations are continuously scrutinized to ensure adequate recycled water quality. User sites will be randomly inspected at least once a year to ensure proper usage of the recycled water. Details of the two types of Producer monitoring are presented below.

Producer Self-Monitoring

The Producer currently monitors the quality and quantity of recycled water leaving the Joint Treatment Plant. A list of the required constituents and the sampling frequencies required under Order No. 96-011 is presented in **Table 6**. Samples will be collected after disinfection has been completed (at Station E-001D) and will be analyzed for Total Coliform, turbidity, and dissolved oxygen. The location of station E-001D is shown in **Figure 1** and samples of flow from this location are representative of the quality of recycled water being distributed to the Users. Meters installed at each delivery point record the total number of gallons distributed to each User. The metered amounts for each User will be used to quantify average monthly use and assess a monthly charge for the recycled water. Total flow from the Producer will equal the sum of the individual meter readings. The results of the described monitoring efforts will be disclosed to the Water Board in the Annual Report, or sooner, if any significant violations of permit conditions occur.

**Table 6. Town of Yountville Recycled Water Program
Producer Sampling Requirements**

Sampling Site	Constituent	Type of Sample	Collection Frequency
Recycled Water User Meters	Producer Flowrate ^a (gal/day)	Continuous measurement	Monthly recording of total flow
E-001D	Total Coliform (MPN/100mL)	Grab	Daily
E-001D	Dissolved Oxygen (mg/L)	Grab	At least 1 time/week
E-001D	Dissolved Sulfides (mg/L)	Grab	3 times/week (only needed if D.O. is less than 5 mg/L)
Recycled Water User Meters	User Flowrate (gal/day)	Continuous measurement	Monthly recording of total flow

^aDetermined from the sum of the individual meter readings.

User Site Inspections

The Producer will perform unannounced, randomly timed inspections of the User sites at least once per year. Observations will be recorded on the User Site Inspection Report (located in **Appendix B**). The observations will verify information reported in the User Self-Monitoring Reports and will include such items as use of the recycled water, operation of storage and irrigation systems, placement of warning signs, and evidence of runoff or ponding.

Reporting

The Producer is required to submit reports periodically to the Water Board to summarize the operation of the Recycled Water Program and report significant violations of the General Water Reuse Permit (Order No. 96-011) conditions. This reporting is done through an Annual Report on program operation and, as needed, Reports of Significant Violations.

Annual Reports

The Producer will submit Annual Reports to the Water Board on the operation of the Recycled Water Program. The Annual Report will cover Recycled Water Program activities during a given calendar year. Deadline for submission will be March 15th of the year following the reporting period. The report will include the monitoring information listed in **Table 6**, the User Site Inspection Reports, the User Self-Monitoring Reports, and the following additional information:

- A list of new recycled water users and their approved uses and projected reuse volumes;
- a summary of effluent violations related to recycled water use, corrective actions taken, and any changes to, or revoking of, User authorizations by the Producer;
- an update of current and future development of the water recycling program; including planning, design, and construction of facilities, preparation of required reports, and progress towards regulatory approvals; and
- progress and evaluation of any special studies or projects being undertaken related to the program.

Significant Violation Reports

A significant violation is defined as a “violation of the DHS reuse criteria that impacts or threatens to impact public health or water quality” and may include storage pond overflows, leaks/breaks in distribution system, or runoff from a User site. A significant violation must be reported to the Water Board within 24 hours. Users are responsible for reporting any violations of their permit conditions immediately by phone to the Producer. The Producer will then record the information supplied by the User, complete a Significant Violation Report (if necessary), and call the Water Board within 24 hours. The Water Board notification must be followed by a written report from the Producer within 15 days to describe the corrective actions taken.

Operations and Maintenance Program

Operations and maintenance (O&M) associated with the Recycled Water Program is the responsibility of both the User and the Producer. The point of separation is located just downstream of the recycled water meters.

User Responsibilities

The User is responsible for operating and maintaining the recycled water distribution system beyond the delivery point (the recycled water meter). Treatment of the recycled water or mixing of recycled water with other water sources prior to irrigation may require additional permitting from Napa County Department of Environmental Management or the Water Board. The User is responsible for pursuing these permits. All backflow prevention devices located on the site must be tested annually and a cross-connection control investigation performed at the same time. (Refer to the section titled “Cross-Connection Control Program” for specific requirements.)

Producer Responsibilities

Operation of the Recycled Water Use Permit Program, the Joint Treatment Plant, and the recycled water distribution system is the responsibility of the Producer, specifically the Wastewater Systems Supervisor (see Section IV, “Program Administration”). All equipment up to and including the recycled water meter is serviced and operated by the Producer. Specific O&M requirements for the Joint Treatment Plant and the recycled water distribution equipment are specified in the Joint Treatment Plant O&M Manual.

Compliance Program

The Water Board will be guaranteed access, for inspection and monitoring purposes, to all premises where recycled water is being produced or used. All records maintained for the Recycled Water Program will also be made available to the Water Board upon request. Each User is responsible for implementing the rules and regulations included in their Recycled Water Use Permit, Titles 17 and 22, and Order No. 96-011.

Activities that could trigger enforcement are shown schematically in **Figure 7**. The Users will perform self-monitoring by routinely observing operation of the recycled water storage facilities and the distribution system. If any violations of their permit conditions are noted, the User will contact the Producer immediately. At that time, the Producer will assess the violation, inspect the site (if necessary), initiate a Significant Violation Report, and notify the Water Board of the violation within 24 hours. The Producer and User will work out the details on how to correct the problems and the prescribed actions and deadline will be included in the Significant Violation Report. A copy of the report will be given to the User

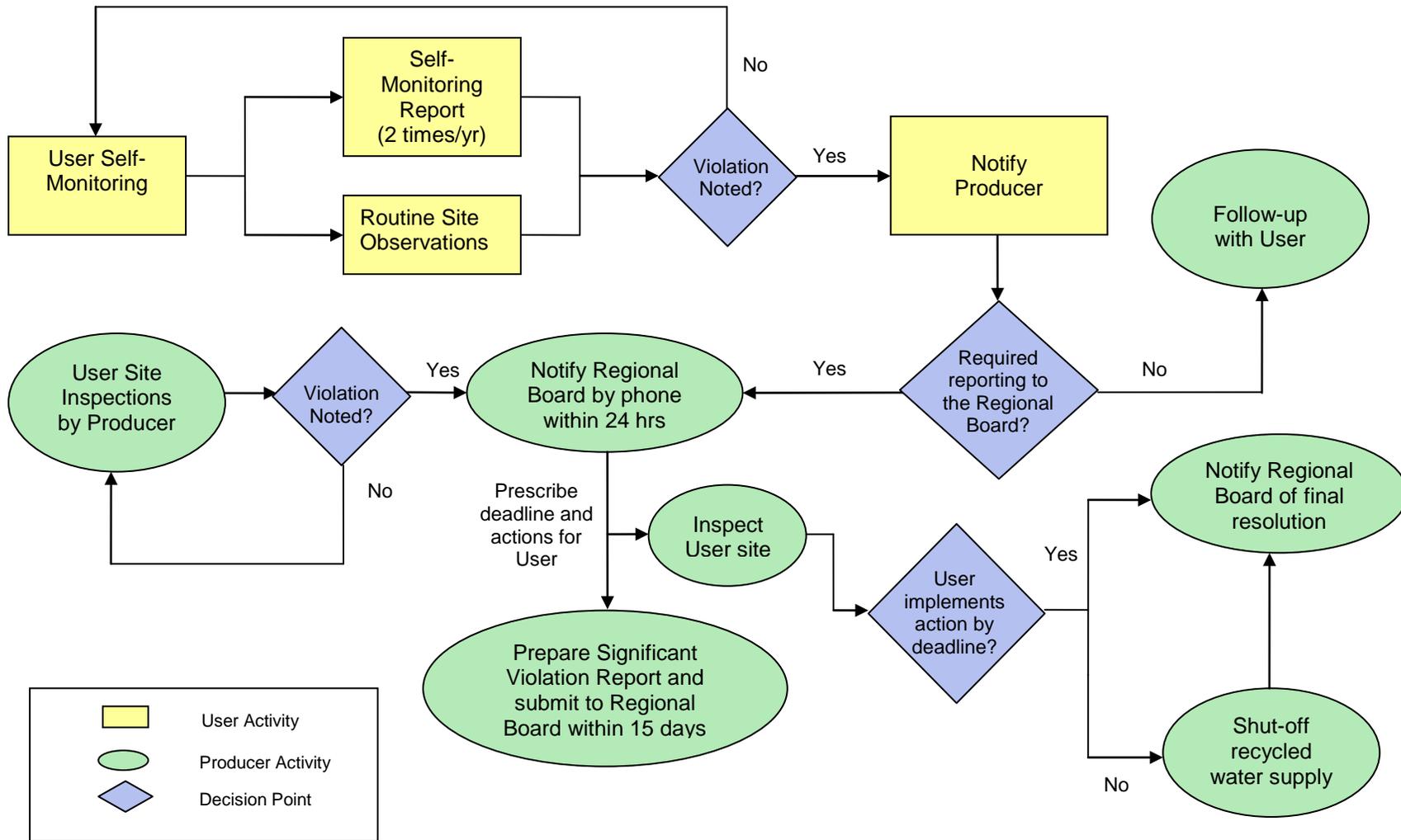


Figure 7. Town of Yountville Recycled Water Program Schematic Representation of Compliance Activities

and submitted to the Water Board within 15 days. The Producer will conduct a site inspection on the deadline date to determine if compliance has occurred. If the User has failed to implement the prescribed actions, the Producer has the authority to shutoff the supply of recycled water to the site.

Producer-conducted inspections of the User sites will also occur during the irrigation season. The Producer will verify site operation according to permit conditions. If permit violations are noted, the actions described above will be implemented. The Producer will notify the Water Board, prescribe corrective actions, establish a deadline, and verify implementation. When the violations have been corrected or the User has been removed from service, the Water Board will be notified of the final resolution.

Training of Users and Employees

Training will consist of providing copies of the regulations and program documents to all Users and Recycled Water Program employees. If necessary, further assistance will be offered through on-site discussions and/or classroom instruction.

User Training

When the Users receive their Recycled Water Use Permit, pertinent program forms and documents will be supplied to the Users. Explanations will be provided regarding how to use the program forms and when to submit the required information. A copy of the Recycled Water Program Manual, Order No. 96-011, and Titles 17 and 22 will also be given to the Users to facilitate complete understanding of the permit program and regulatory requirements. Additional training will be provided by the Producer if any particular issues are noted.

Producer Employee Training

New employees of the Town of Yountville Recycled Water Program will be given an orientation on program operation and regulatory requirements. The Recycled Water Program Manual (this document), Order No. 96-011, Titles 17 and 22, and the Joint Treatment Plant O&M Manual section on water recycling will be read by the new employees. A facility tour will then be conducted to demonstrate how the recycled water is produced and distributed to the User sites. The new employees will be introduced to each of the Recycled Water Supervisors and a tour will be conducted of the User sites to identify the storage and distribution facilities.

Emergency Procedures and Notification

Emergencies, such as equipment failures, cross-connections, earthquakes, and power outages, may occur at either a User site or at the Producer's facilities. In the event of such emergencies, notification of the Producer or the User (as applicable) must take place as soon as possible. An immediate change in operations or termination of flow may be required to minimize risks to human health. The emergency procedures to be followed by the User and the Producer are detailed in the following paragraphs.

User Emergency Procedures

In the case of a recycled water emergency at a User site, the Producer must be contacted in order to terminate flow to the site. Depending on the nature of the emergency, the User may also be directed to shut down the potable water system. The Town of Yountville Recycled Water Program Administration is presented as **Figure 8** and includes contact names and phone numbers. The Wastewater Systems Supervisor is the primary contact person. The supervisor is available 24 hours a day, 7 days a week and is knowledgeable about the Recycled Water Program and its facilities. The emergency contact phone numbers are also included on the Recycled Water Use Permit and on the User Self-Monitoring Report for easy reference.

Producer Emergency Procedures

If a system failure occurs at the Joint Treatment Plant and properly treated recycled water cannot be guaranteed to the User, the Producer will shut off the reclaimed water pumps. Emergency storage at the Joint Treatment Plant and User ponds will be utilized until the problem has been corrected (see "Contingency Plan" in **Appendix E**). The Users will be notified by phone as soon as possible of the flow termination, the nature of the failure, and an estimation of the required down-time. If inadequately treated water was delivered, the Producer will dictate the following mandatory precautions to be implemented by the User:

- Distribute information on recycled water quality problems to all site personnel,
- Cease irrigation of grapes and landscaped areas until JTP staff provide notification that water is safe to use,
- Restrict access to recycled water storage areas and distribution equipment,
- Post additional warning signs,
- Prevent skin and respiratory contact with recycled water, and
- If necessary, allow access by Joint Treatment Plant staff to install temporary treatment equipment and/or test water quality.

SECTION IV PROGRAM ADMINISTRATION

The Town of Yountville Recycled Water Program Administration is presented as **Figure 8**. The program is directly administered by the Wastewater Systems Supervisor. The supervisor manages operation of the Joint Treatment Plant and the Recycled Water Program. When permit violations are noted or emergencies occur at the User sites, the Wastewater Systems Supervisor must be contacted by the User's Recycled Water Supervisor. The Wastewater Systems Supervisor also issues permits, prescribes follow-up activities for permit violations, and conducts User training. Operators at the Joint Treatment Plant perform repairs on the recycled water distribution system and may conduct User site inspections as directed by the Wastewater Systems Supervisor. The Town Administrator and the Town Council oversee the work of the Wastewater Systems Supervisor and periodically evaluate the Recycled Water Program.

The San Francisco Bay Regional Water Quality Control Board is the permitting agency for Order No. 96-011 and will provide the primary regulatory oversight for the Recycled Water Program. A contact name and phone number for the Water Board representative are presented in **Figure 8**. This representative must be contacted in case of a recycled water emergency or a significant permit violation. However, the Water Board can also be contacted, if needed, regarding User actions, permit requirements, and proposed operational changes. A contact name and phone number are also presented in **Figure 8** for the local office of the California Department of Health Services (DHS). DHS sets the requirements for recycled water use, while the Water Board administers the program and enforces the requirements. Specific questions about recycled water regulations should be directed to the DHS contact person.

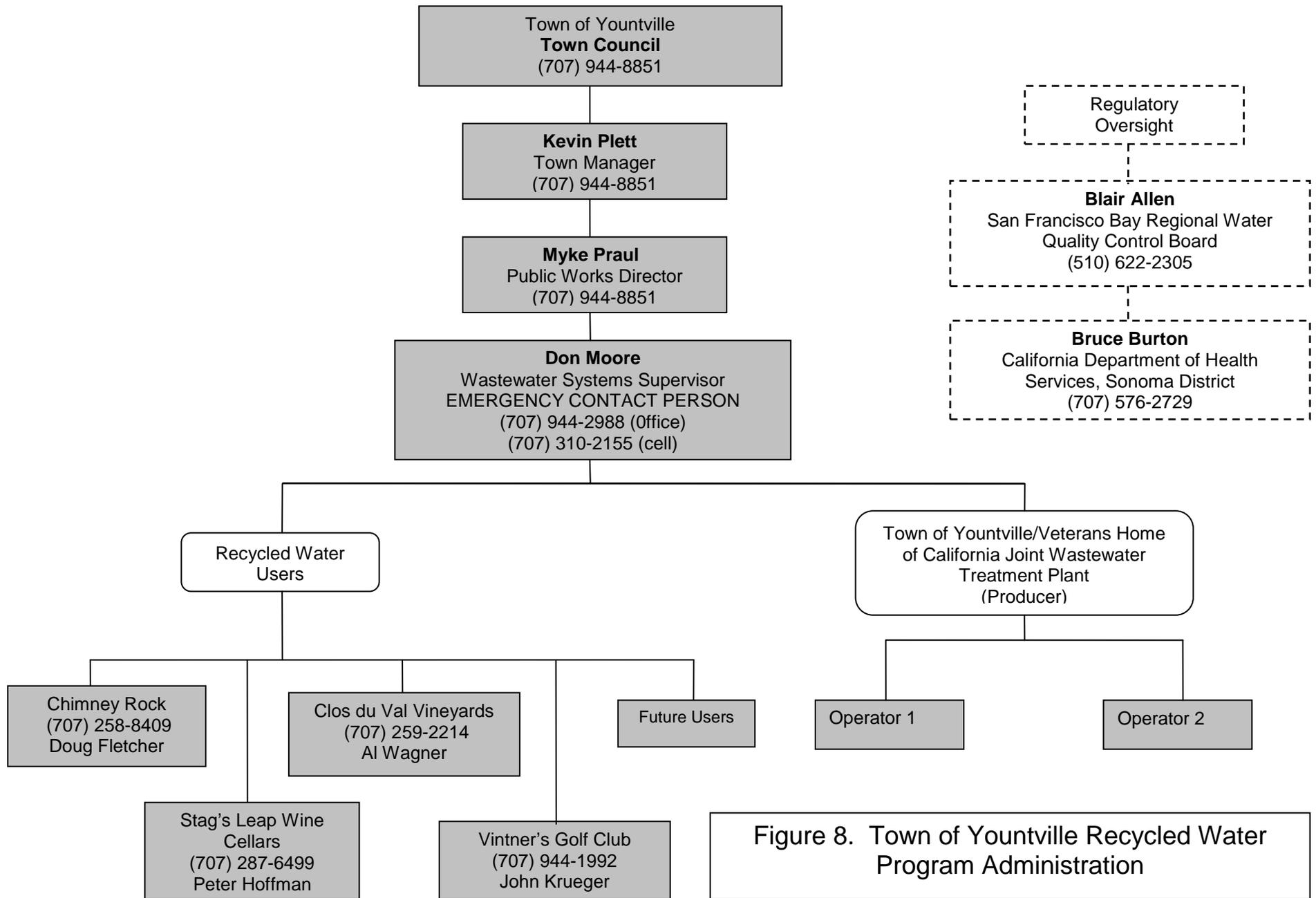


Figure 8. Town of Yountville Recycled Water Program Administration

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