

Possible Technical Alternatives to Address Groundwater Depletion

Possible Technical Approaches	
Stormwater Capture & Recharge	Assess how much stormwater is potentially available and could be captured and recharged, optimal recharge locations, and facilities needed. Include flood management, habitat enhancement, and recreation elements.
<p style="text-align: center;"><i>Option 1</i></p> <p style="text-align: center;">Assumptions</p> <p>4 events per year 2-3 ft recharge per event 8-12 feet recharge/yr Capture/Recharge 320 - 1200 AF/yr</p>	<p><i>Medium to large scale project(s) 40-100 acres, 20-50 acres each?</i></p> <p>Possible location(s)</p> <p>Cost range \$4,000,000-\$20,000,000</p> <p>Land purchase/easement \$20,000 to \$100,000 per acre for purchase; \$5,000 - \$10,000 per year for easement</p> <p>Planning/Design \$100,000-250,000</p> <p>Construction \$250,000-1,000,000</p> <p>Operation & Maintenance \$10,000 to \$20,000 per year</p> <p>Timing – will require studies, site acquisition, design and environmental compliance; estimate 2 to 5 years to get project operational</p> <p>Cost/AF \$25 – \$200/AF for land purchase - \$80 – 95/AF for easement</p> <p>Estimated over 20 year time</p>
<p style="text-align: center;"><i>Option 2</i></p> <p style="text-align: center;">Assumptions</p> <p>4 events per year 2-3 ft recharge per event 8-12 feet per year Capture/Recharge 1-6 AF each, Times 20 = 20-120 AF Annual Recharge</p>	<p><i>Agricultural distributed stormwater capture and recharge - ¼ to ½ acre each?</i></p> <p>Distributed across alluvial basin 20 locations</p> <p>Recharge efficiency: unknown – location specific</p> <p>Cost range Design/Construct \$10,000-20,000/location - \$200,000 to \$400,000</p> <p>O&M \$5,000/yr</p> <p>Timing – can be done with minimal design; assume 1 new site per year over 20 years starting in 2020.</p> <p>Cost/AF \$170-\$3,250/AF</p> <p>Estimated over 20 year time</p> <p>Assumes capture of sheetflow, upland flows and direct precipitation and not streamflow which would require SWRCB water rights permit</p>
<p style="text-align: center;"><i>Option 3</i></p> <p style="text-align: center;">Assumptions</p> <p>2,000 households 500 gallons per household Capture 3AFY</p>	<p><i>Distributed stormwater capture, recharge and reuse (LID approach)</i></p> <p>Techniques include elements such as rain gardens and bioretention; vegetated swales, buffers, and strips; aeration techniques for capture; rain barrels and cisterns; permeable pavers; impervious surface reduction and disconnection distributed across alluvial basin.</p> <p>Cost range \$1,000 per household? \$2M total over 20 yrs</p> <p>Timing – Will require incentives for broad application – grant funds could help; assume 2,000 households added to program over 20 year period.</p> <p>Cost/AF +\$30,000/AF</p> <p>Estimated over 20 year time</p>

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Stormwater Capture and Storage	Assess the potential for small and large surface water storage ponds as temporary storage to offset a portion of agricultural groundwater demands.
<i>Option 1 Assumptions 8 feet height and volume</i>	<p>Small surface storage ponds (No. acre/storage volume) - $\frac{1}{4}$ to $\frac{1}{2}$ acre each</p> <p>Number of acres of storage ponds 20-40</p> <p>Distributed in rural areas in southern Sonoma Valley</p> <p>Capture volume 1-4 AF each, times 20 = 20-80 AF</p> <p>Cost range Design/Construct \$10,000-20,000/location - \$200,000 to \$400,000</p> <p>O&M \$2,000- \$5,000/year</p> <p>Timing – can be done with minimal design; assume 1 new storage pond per year over 20 years</p> <p>Cost/AF \$375 - \$600/AF</p> <p style="padding-left: 20px;">Estimated over 20 year time</p> <p>Assumes capture of sheetflow, upland flows and direct precipitation, and not streamflow which would require SWRCB jurisdictional water rights permit</p>
<i>Option 2 Assumptions 8 feet height volume 400-800AF</i>	<p><i>Medium to large scale project(s) 40-100 acres , 20-50 acres each?</i></p> <p>Possible location(s)</p> <p>Cost range \$4,000,000-\$20,000,000</p> <p>Land purchase/easement \$20,000 to \$100,000 per acre for purchase; \$5,000 - \$10,000 per year for easement</p> <p>Planning/Design \$100,000-250,000</p> <p>Construction \$250,000-\$1,000,000</p> <p>Operation & Maintenance \$2,000 to \$5,000 per year</p> <p>Timing – will require studies, site acquisition, design and environmental compliance; estimate 2 to 5 years to get project operational</p> <p>Cost/AF \$500 – \$2,850/AF for land purchase - \$100 – \$1,300/AF for easement</p> <p style="padding-left: 20px;">Estimated over 20 year time</p> <p>Assumes capture of sheetflow, upland flows and direct precipitation, and not streamflow which would require SWRCB jurisdictional water rights permit</p>

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Groundwater Banking	Bank imported Russian River in Sonoma Valley aquifers using wells. Evaluate how much Russian River water could potentially be banked, optimal banking locations, and the facilities needed.
<p style="text-align: center;"><i>Option 1</i> <i>Assumptions</i> Recharge 100-500 AFY Recovery efficiency: 90%</p>	<p>Water Contractor facilities One to two wells each for City of Sonoma and Valley for the Moon Water District Distributed in areas of City and Valley of the Moon jurisdictional areas Cost range Capital cost & permitting – \$350,000 for retrofits to existing wells & permitting or \$2,000,000, for two new wells O&M - \$25,000/year/well for 20 yrs = \$1,000,000 Cost of the water to bank \$900/AF at 500AF for 20 yrs = \$9,000,000 Schedule – Feasibility level complete – requires pilot testing perhaps as early as next year - Commence in 2020, assume 20 year period for estimating Cost/AF - \$1,000 - \$5300/AF Retrofitted Wells \$1,200-\$6,000/AF new wells</p>
<p style="text-align: center;"><i>Option 2</i> <i>Assumptions</i> Recharge volume: 500-1,000 AFY Recovery efficiency: 95%</p>	<p>Deliveries outside Water Contractor areas One to two wells each for both of the depleted areas Distributed in the two groundwater depletion areas jurisdictional areas Cost range Capital cost - 2 to 4 wells @ \$1M/well = \$2M-\$4M Conveyance 5 to 10 miles @ \$500,000/mi = \$2.5M -\$5M O&M - \$25,000/year/well for 20 yrs = \$1,000,000 - \$1,000,000 Cost of the water to bank \$900/AF at 500AF - 1000 AF for 20 yrs = \$9,000,000 - \$18,000,000 Timing – requires institutional coverage in those areas – also studies and design; assume commence project operation in 2025 Cost/AF - \$1,450</p>
Increase Recycled Water	Increase the use of recycled for agricultural and landscape irrigation. Evaluate recycled water availability with Sonoma County Sanitation District build out as in lieu substitution to reduce groundwater demand, and optimal locations for application.
<p style="text-align: center;"><i>Option 1</i> <i>Assumptions</i></p>	<p>Agricultural irrigation and commercial landscape irrigation Build-out of Sonoma Valley Sanitation District plant recycled water piping Distributed in rural areas in southern Sonoma Valley Groundwater replacement volume 2,400 AF/yr Cost range \$ Timing - build out by 2035 Cost/AF \$</p>

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Increase Conservation	Increase rural area domestic and agricultural conservation. Assess potential for rural domestic conservation by reducing groundwater demand using tools and incentives available for urban area BMPs. Develop assumptions and evaluate potential additional viticulture and non-viticulture additional conservation amounts.
<p style="text-align: center;"><i>Option 1</i> <i>Assumptions</i> <i>This is Voluntary –</i> <i>Non-Mandatory –</i> <i>Mandatory would fall</i> <i>under</i> <i>Institutional/Regulatory</i> <i>Options</i> <i>Indoor water efficient</i> <i>appliance/fixtures save</i> <i>0.06 AF/yr/household</i> <i>Turf removal saves 0.10</i> <i>AF/yr/parcel</i></p>	<p>Rural domestic conservation Number of domestic residences and approximate savings per residence Distributed in rural areas in southern Sonoma Valley Assume one third of total 4,500 parcels = 1,500 parcels Groundwater replacement volume 240 AF/yr Cost range Timing Cost/AF Description: Provide incentives for and funding for increasing conservation with water efficient appliances and fixtures, and improved water efficiency in landscape irrigation and landscaping with native and drought tolerant plans and cash for grass.</p>
<p style="text-align: center;"><i>Option 2</i> <i>Assumptions</i></p>	<p>Rural agricultural conservation Number of acres and approximate savings per acre Distributed in rural areas in southern Sonoma Valley Groundwater replacement volume AF/yr Cost range Timing Cost/AF Description:</p>
In Lieu Surface Water Substitution for Groundwater	Assess potential for expanding deliveries of surface water for in lieu substitution to meet groundwater demands, focused in areas of groundwater declines, considering conveyance and connection costs.
<p style="text-align: center;"><i>Option 1</i> <i>Assumptions</i></p>	<p>Rural agricultural and domestic wells replacement with imported surface water Number of wells to replace, cost of conveyance piping and connection Requires additional institution or institution expansion Distributed in rural areas in southern Sonoma Valley Groundwater replacement volume 500-1,000 AF Cost range Conveyance 20 to 50 miles @ \$1M/mi = \$20m -\$70M Timing – will require institutional changes (General Plan and LAFCo), studies, design and environmental compliance Cost of the replacement water \$900/AF at 500AF – 1000AF for 20 yrs = \$9,000,000-\$18,000,000 Cost/AF Very High \$2,900-\$4,400/AF – does not include storage or CEQA or permitting or design Facilities description: Requires Additional conveyance and/or storage</p>

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Pumping Redistribution	Assess potential for pumping redistribution to reduce demand in areas of groundwater level decline.
<i>Option 1 Assumptions</i>	<p>Rural agricultural and domestic pumpage redistributed from groundwater depletion areas</p> <p>Number of wells to replace, cost of conveyance piping and connection</p> <p>May require additional institution or institution expansion</p> <p>Distributed in rural areas in southern Sonoma Valley</p> <p>Groundwater replacement volume</p> <p>Cost range</p> <p style="padding-left: 40px;">Capital cost - 2 to 4 wells @ \$1M/well = \$2M-\$4M</p> <p style="padding-left: 40px;">Conveyance 5 to 10 miles @ \$1M mi = \$5M -\$10M</p> <p style="padding-left: 40px;">O&M - \$25,000/year/well for 20 yrs = \$500,000 - \$1,000,000</p> <p style="padding-left: 40px;">Cost of the water to bank \$900/AF at 500AF - 1000AF for 20 yrs = \$9,000,000-\$18,000,000</p> <p>Timing - will require studies and design and environmental compliance</p> <p>Cost/AF \$1,650</p> <p>Requires Conveyance and may require New Wells</p>
Salinity Intrusion Mitigation	Consider different options and preliminary cost estimates for salinity intrusion mitigation.
<i>Option 1 Assumptions</i>	<p>Replace groundwater wells with imported surface water along southern valley</p> <p>Groundwater replacement volume 250-1,000 AF</p> <p>Cost range</p> <p style="padding-left: 40px;">Conveyance 5 to 20 miles @ \$1M/mi = \$5m -\$20M</p> <p>Timing - will require institutional changes (General Plan and LAFCo), studies, design and environmental compliance</p> <p style="padding-left: 40px;">Cost of the replacement water \$900/AF at 500AF - 1000AF for 20 yrs = \$9,000,000-\$18,000,000</p> <p>Cost/AF Very High 1,900-2,800/AF - does not include storage or CEQA or permitting or design</p>
<i>Option 2 Assumptions</i>	<p>Recharge wells along southern valley - recycled water and/or imported</p> <p>Number of wells: 10 - 20 ? Distributed along southern Sonoma Valley, based on additional studies to locate wells</p> <p>Groundwater replacement volume 500-1,000AFY</p> <p>Cost range Capitol</p> <p style="padding-left: 40px;">Capitol cost per well \$ 250,000/well - \$2.5M-\$5M</p> <p style="padding-left: 40px;">Conveyance 5 miles @ \$500,000/mile = \$2.5M</p> <p style="padding-left: 40px;">Water use per well 50-100 AF/yr</p> <p style="padding-left: 40px;">Water cost per year - \$250,000-\$1,000,000 @\$500-\$1,000/AF</p> <p style="padding-left: 40px;">O&M cost per well - average \$ \$1,000/well/yr for 20 years =\$2,000,000 \$12,000,000 - \$19,500,000 Capital and O&M and water</p> <p>Timing - will require studies and design and environmental compliance</p> <p>Cost/AF \$1,200 to \$975</p> <p>Estimated over 20 year life</p>

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Desalination	Consider different options and preliminary cost estimates for seawater desalination.
<i>Assumptions</i>	Desalination plant with intake at San Pablo Bay Groundwater replacement volume Timing - will require studies and design and environmental compliance Cost range - \$0.5-1.0B capital cost Cost/AF - \$950-\$1,000 per AF Conveyance and Storage Costs Unknown
Baseline	
No Action Alternative	Considers the costs and consequences of not taking action - no changes to current practices.

Preliminary DRAFT Screening Matrix of Proposed Technical Alternatives

Item No.	PROPOSED TECHNICAL ALTERNATIVE	Screening Criteria										Notes
		Relative Cost	Readiness to Proceed	Feasibility/Implementability	Leveraging Opportunity	Community & Political Support	Multi-Objective/Supports Watershed Objectives	Effectiveness Addressing GW Depletion	Addressing GW Depletion	Addressing GW Depletion	Addressing GW Depletion	
Stormwater Capture & Recharge												
1	Option 1 - Medium to large scale project(s) 40 to 100 acres total, 20-50 acres each	\$\$	L	?	H	?	H	M	?			Technical Feasibility and Locations TBD
2	Option 2 - Agricultural distributed stormwater capture and recharge - ¼ to ½ acre each	\$	M	M	M	H	?	L	?			Technical Feasibility and Locations TBD
3	Option 3 - Domestic distributed stormwater capture and recharge (LID approach)	\$\$	M	M	H	H	H	L	L			
Stormwater Capture and Storage												
4	Option 1 - Small surface storage ponds (No. acre/storage volume) - ¼ to ½ acre each	\$	H	H	M	H	H	L	L			
5	Option 2 - Large surface storage ponds (No. acre/storage volume) 40 to 100 acres total, 20-50 acres each	\$\$	L	?	M	?	M	M	M			
Groundwater Banking												
6	Option 1 - Contractor Facilities - One to two wells each for City of Sonoma and Valley for the Moon Water District	\$	M	M	M	M	M	L/M	L			Technical Feasibility TBD
7	Option 2 - Facilities outside Water Contractor areas - One to two wells each for both of the depleted areas	\$\$\$	L	L	L	L	M	H	?			Technical Feasibility TBD/Requires Institutional changes
Increase Recycled Water Use to Reduce Groundwater Demand												
8	Option 1 - Agricultural irrigation and commercial landscape irrigation	\$\$/\$ \$\$	M	H	M	M/H	M	M/H	L			Needs to be split into Phases
Increase Conservation to Reduce Groundwater Demand												
9	Option 1 - Increase Rural Area Domestic Conservation	\$	H	H	M	H	M	M	L			
10	Option 2 - Increase Rural Area Agricultural Conservation	\$	M	M	M	H	M	M	L			
In Lieu Surface Water Substitution for Groundwater												
11	Option 1 - Rural agricultural and domestic wells replacement with imported surface water	\$\$\$	L	L	M	?	M	H	M			Technical Feasibility TBD/Requires institutional changes/storage
Pumping Redistribution												
12	Option 1 - Rural agricultural and domestic pumpage redistributed from groundwater depletion areas	\$\$\$	L	L	M	L	M	H	H			Technical Feasibility TBD/Requires institutional changes
Salinity Intrusion Mitigation												
13	Option 1 - Replace groundwater wells with imported surface water along southern valley	\$\$\$	L	L	M	?	M	M	H			Requires institutional changes
14	Option 2 - Injection wells along southern valley - recycled water and/or imported water	\$\$\$	L	L	M	?	M	M	M			Technical Feasibility TBD/Requires significant water quality permitting
Desalination												
15	Desalination plant with intake at San Pablo Bay or tidal marshlands area	\$\$\$\$	L	L	M	L	L	L	H			Technical Feasibility TBD

? | Unknown or Significant Uncertainty

Possible Criteria for Screening and Prioritization of Alternatives

- 1) **Primary Objective: Effectiveness at Stabilizing and Recovering Groundwater Elevations in Areas of Groundwater Depletion**
 - High – Provides substantial, measurable progress toward preventing further groundwater elevation decline in both short- and long-term and recovering groundwater levels in the long-term
 - Medium – Provides some progress toward preventing further groundwater elevation decline and/or beneficial effect may be less-certain or difficult to measure. Ability to provide long-term recovery of groundwater elevations is uncertain.
 - Low – Only minor or uncertain impact on groundwater elevations; long-term benefits may be unknown
- 2) **Relative Cost** – qualitative approximation of the relative cost of the recommended action (including initial cost, ongoing operation and maintenance and cost per acre-foot)
 - High Priority – Low cost (\$1000's-10,000's and minimal ongoing cost), and may be addressed with staff/in-kind services
 - Medium Priority – In between high and low
 - Low Priority – Very high cost relative to other actions (initial cost in \$millions, and/or high ongoing costs)

* Indicate if a long-term annual or periodic funding needed
- 3) **Readiness to Proceed** – recommended actions that are ready to proceed in a relative sense to one another
 - High – Can proceed with little or no preparation under existing regulatory and institutional structures
 - Medium – Needs preparation of a workplan and or studies; may require regulatory compliance or minor changes to existing institutional authority
 - Low – Needs plans and studies and likely a pilot to initiate; may require significant regulatory compliance effort and/or institutional changes
- 4) **Feasibility/Implementability** – recommended actions are considered in terms of relative complexity, including legal, regulatory and institutional challenges, and likelihood of successful completion
 - High – Low complexity and high likelihood of successful completion
 - Medium – Medium complexity and likelihood of successful completion
 - Low – High complexity and uncertain likelihood of successful completion
- 5) **Leveraging Opportunity** – recommended actions that can leverage multiple resources, funding opportunities, multiple partners, or integrate several key opportunities are considered higher than those that do not
 - High – High likelihood of leveraging resources and opportunities
 - Medium – May be a possibility of leveraging resources
 - Low – Low likelihood of leveraging resources and opportunities
- 6) **Community and Political Support** – actions that have potential for community and political support are considered higher priority than those with poor potential support

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- High – High community and political support
 - Medium – Mixed or neutral community and political support
 - Low – Substantial community and/or political opposition
- 7) **Multi-Objective/Supports Watershed Health** – Integrated projects that fulfill multiple objectives of the groundwater management plan (in addition to maintaining or increasing groundwater levels) and those that support overall watershed health, including aquifer recharge protection and enhancement, water quantity and quality, flood mitigation, and habitat protection, are considered higher priority than those that do not
- High – Meets many objectives and actions to support watershed health
 - Medium – Meets a few objectives and actions to support watershed health
 - Low – Meets little or no additional objectives and actions to support watershed health
- 8) **Addresses Potential Adverse Impacts or Unintended Consequences**
- High Priority– Little or no risk of adverse impacts or unintended consequences
 - Medium Priority – May be a possibility of adverse impacts or unintended consequences
 - Low Priority – Obvious risk of adverse impacts or unintended consequences



Sonoma Valley 5th Street Recycled Water Pipeline

The Sonoma Valley County Sanitation District (SVCSD) is proposing to construct a recycled water pipeline in collaboration with the Sonoma Valley Unified School District to provide recycled water to Sonoma Valley High, Adele Harrison Middle and Prestwood Elementary schools. The recycled water will help irrigate the playing fields at each school, offsetting potable water used for irrigation and providing high-quality, cost-effective, and sustainable drought-proof water. The recycled water may also be used to offset irrigation at the City's Engler Street Park. There will be an opportunity for some agricultural users along the pipeline route to connect to the system, offsetting current groundwater pumping.

Background

Ensuring sustainable groundwater supplies in Sonoma Valley calls for a diversified water supply approach including increased conservation, groundwater recharge and the use of recycled water. Sonoma Valley meets its water needs through a combination of groundwater and Russian River water, with more than half the water demand met by local groundwater.

The Sonoma Valley groundwater basin has localized decline of groundwater levels, relatively low aquifer productivity and saline intrusion in the south end of the valley. To reach Sonoma Valley, water from the Russian River must travel over 30 miles and can be impacted by drought and changed conditions to protect endangered fish. Replacing traditional irrigation with recycled water ensures a more dependable supply of drinking water for everyone.

Project Timeline

2015: Project design, agreements and permitting.

2016: Project Construction: Construction will include about 1.5 miles of new pipe along Watmaugh Rd, 5th Street East, and Denmark Street to Sonoma Valley High School.

Benefits of this pipeline project include:

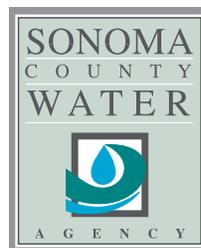
- Using recycled water to irrigate playing fields is a safe and sustainable way to save an estimated \$60,000 each year between the three schools – money that can be invested back into the schools.
- Reliable, drought-proof, cost-effective water supply to offset potable water used for landscape irrigation
- Conservation of drinking water that is currently being used for landscape irrigation
- Using recycled water instead of potable water for irrigation creates additional “space” in the water supply system, delaying the need for bigger pipes and pumps (and associated costs) for future potable water supply

Funding

The total cost of the project (about \$3 million) will be funded with grants and through the SVCSD's capital improvement fund. The project has been recommended to receive \$1.02 million in grant funding from the California Department of Water Resources Proposition 84. The SVCSD will cover the remainder of the cost to bring the water to the schools, and the schools will update the irrigation system to accommodate recycled water, a cost that will be offset by paying the lower rate for recycled water.

How Can I Find Out More?

Visit www.sonomacountywater.org/sonoma-valleyrecycledwater for more project information or to receive email updates. Additionally, contact Brad Sherwood at the Sonoma County Water Agency at (707)547-1927 or sherwood@scwa.ca.gov.



Find us at
www.sonomacountywater.org



*Securing our Future by Investing
in our Water Resources,
Environment & Community*

Frequently Asked Questions About Recycled Water

What is recycled water?

Water is continually recycled in nature through the water cycle. Modern wastewater treatment replicates the natural recycling process to restore large quantities of water quickly and effectively. Recycled water produced by the Sonoma Valley County Sanitation District (SVCS D) is treated to tertiary recycled water standards (also referred to as advanced wastewater treatment) which is the highest level of treatment defined by the State of California, Title 22 California Code of Regulations. The wastewater goes through primary treatment, biological treatment, filtration, and disinfection before it is considered tertiary recycled water that can be used in recycled water applications including landscape irrigation.

Why do we need recycled water?

Recycled water is a safe, locally-produced, drought-proof and reliable water supply suitable for irrigation (landscape and agricultural) and commercial/industrial uses. Every gallon of recycled water used for irrigation, wetland restoration and other uses can conserve a gallon of our precious drinking water supply. Additionally, recycled water protects expensive landscaping from the effects of droughts and water shortages.

Where is recycled water used?

Recycled water is currently used to irrigate parks, greenbelts, schools, golf courses, agricultural lands and other large areas for landscape irrigation. There are approximately 400 parks, playgrounds and schools in California already using recycled water. It can also be used for commercial and industrial processes that don't require drinking water. Recycled water has been used throughout the nation for over 80 years. Los Angeles County's sanitation districts have provided treated wastewater for landscape irrigation in parks and golf courses since 1929 and the first reclaimed water facility in California was built at San Francisco's Golden Gate Park in 1932.

In the local area, recycled water is used in Windsor, Petaluma, Rohnert Park, Healdsburg, Calistoga, St Helena, Yountville, Napa, Santa Rosa, San Rafael, Novato, San Francisco, San Jose, Santa Clara, Daly City and other Bay Area communities. It is used for agricultural irrigation in the Carneros region, restoration of the Napa Sonoma Salt Marsh, landscape irrigation at Windsor High School, Terra Linda High School in Marin County, A Place to Play Park in Santa Rosa, Napa Valley College, Stone Tree Golf Course in Novato, and Miller Creek Middle School in Marinwood among many others.

What is the quality of recycled water?

Recycled water meets strict federal, state and county health and safety requirements. Of the three quality standards for recycled water in California, SVCS D's is of the highest quality.

Is recycled water safe?

Recycled water is a safe way to preserve our natural water resources. It is used for specific purposes in a manner that is protective of human health, animal welfare and the natural environment. Recycled water is sent to customers from SVCS D treatment plant through a series of purple pipes that are separate from the drinking water system and must meet strict regulatory requirements.

For schools and parks: Recycled water served by SVCS D is treated to a very high level and certified safe for public contact, including children. In over 80 years of recycled water use in California, there have been no documented cases of any ill effects from proper use.

For pets: The quality of recycled water is close to drinking water and would be safer for your pet than drinking from a pond or ditch. Recycled water has been carefully treated and disinfected.

Does recycled water smell or look different than tap water?

Recycled water is clear and colorless. The smell and visibility is very similar to tap water.

What happens with recycled water now?

Currently Sonoma's wastewater undergoes extensive treatment at SVCS D treatment plant and is used as an important irrigation supply for farmers and for restoring the environment. During the wet weather period, the District's treated wastewater is discharged into a tributary of the San Pablo Bay. During the dry weather period, the treated effluent is stored in the District's four recycled water reservoirs and then used for wetland enhancement and dairy and vineyard irrigation.

Is recycled water cost effective?

SVCS D treats wastewater to the same level whether it is used for irrigation purposes or discharged to the bay. The major cost of recycled water is constructing pipelines to deliver it to users. SVCS D has carefully identified the shortest recycled pipeline routes that will provide the most benefit to the community. Additionally, SVCS D treatment plant is a much closer source of landscape irrigation water than the Russian River. Staff continues to look for funding opportunities to assist in the construction cost of the pipelines, such as funding from Proposition 84.

Does recycled water save the user money?

Most large irrigation users will see significant cost savings by using recycled water. In addition, there are long-term cost savings for the ratepayers of the SVCS D.

Where can I find out more about recycled water?

WateReuse Association (www.watereuse.org) or Thirsty Planet (www.athirstyplanet.org).