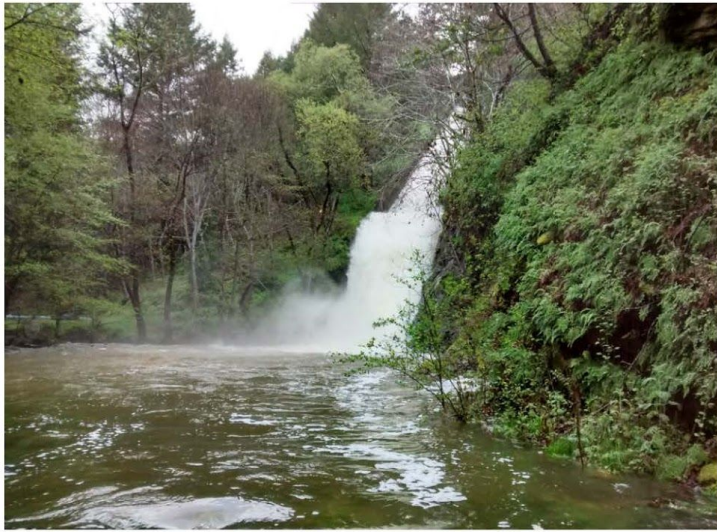


Water for Santa Cruz – Perspectives on Regional Water Supply



WATER FOR SANTA CRUZ



Regional Cooperation is the Key to Solving the Water Shortages in North Santa Cruz County

Santa Cruz City has abundant water, but lacks storage.

Soquel Creek has no source of water other than wells. However, Soquel Creek has billions of gallons of unused capacity for water storage in its aquifers.

(focus on Mid-county)

The commencement of the Mid County Groundwater Agency (MGA) increases our chances to solve our regional problem of adequate water supply.

As we begin a new stage in our quest for sustainable water, we have a unique opportunity to take advantage of what nature gives to Santa Cruz county. Abundant winter rainfall and stream flows during the rainy season provide us with all the water we need. We need only to cooperate regionally to harvest and store the water.

To achieve water security we need to combine three components presently held by separate jurisdictions:

1. Additional water supply
2. Storage in aquifers, the groundwater basins
3. Infrastructure to treat and transport the water

Water Supply: Location, Rights and Storage

1. San Lorenzo winter water supply is unused and available:

	Available (m gallons)	Pumped (m gallons)	Unused (M gallons)
19 year Average (1998 -2016)	900	47.86	852.14

1a. Water rights to transfer water come from North Coast streams:

32 year Average (1985 -2016) (million gallons/year)	Santa Cruz Plan to 2035 (million gallons/year)
995.28	671

2. Storage for billions of gallons exists in aquifers.

3. Infrastructure exists now to transfer 1.4 million gallons/day = 475 million gallons/year.

Note: All data from Santa Cruz Annual Water Dept. reports, and Urban Water Management plans, 2010 and 2015.

Appendices:*

Appendix 1. North Coast Stream Production 1985 – 2016

Appendix 1a. North Coast Water Source 2015 – 2035

Appendix 2. San Lorenzo Pumping to Loch Lomond

Appendix 3. Water Rights re: North Coast and San Lorenzo River

* added October 5, 2017

Appendix 1. North Coast Stream Production 1985 – 2016

Annual North Coast Stream Production (m gallons)			
1985	1,004		
1986	1,123		
1987	592		
1988	692		
1989	872		
1990	821		
1991	661		
1992	633		
1993	826		
1994	665		
1995	1,207		
1996	1,312		
1997	1,291		
1998	1,484		
1999	1,580		
2000	1,417		
2001	1,326		
2002	1,386		
2003	1,297		
2004	1,315		
2005	1,487		
2006	1,603		
2007	848		
2008	590		
2009	814		
2010	1,168		
2011	1,211		
2012	710		
2013	399		
2014	503		
2015	471		
2016	541		
Total	31,849		
32 year average	995.28		

Appendix 1a. North Coast Water Source 2015 – 2035

City of Santa Cruz

2015 Urban Water Management Plan

Table 6-10. Water Supplies — Projected						
Water Supply	Additional Detail on Water Supply	Projected Water Supply (mgy) <i>Report To the Extent Practicable</i>				
		2020	2025	2030	2035	2040 (opt)
		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Surface water	North Coast Sources	637	642	671	671	n/a
Surface water	San Lorenzo River	1,882	1,842	1,829	1,834	n/a
Surface water	Loch Lomond Reservoir	595	551	540	547	n/a
Groundwater	Live Oak/Beltz Wells	138	129	127	128	n/a
Transfers		Near term transfer to SqCWD of up to 100 mgy to assess the effect of reduced pumping on the groundwater basin and explore the opportunity of developing a longer-term agreement for aquifer storage and recovery				
Exchanges						
Recycled Water		Recycled water feasibility study investigating options including regional partnership opportunities for a recycled water project to provide drought resistant supply and options for groundwater management strategies due to overdraft conditions of local basins				
Desalinated Water				Potential project to expand recycled water supply or investigate desalination		
Other						
	Total	3,252	3,164	3,167	3,180	0

NOTES: Projected supply volumes shown represent the output values from the City's Confluence (water supply) model. These projections consider the operations of the City's current supply system in response to a projected demand.

Appendix 2. San Lorenzo Pumping to Loch Lomond

Water Usage History San Lorenzo Pumping:

	Available (m gallons)	Pumped (m gallons)	Unused (M gallons)
1998	900.00	0.00	900.00
1999	900.00	0.00	900.00
2000	900.00	0.40	899.60
2001	900.00	0.25	899.75
2002	900.00	0.00	900.00
2003	900.00	0.00	900.00
2004	900.00	11.66	888.34
2005	900.00	0.00	900.00
2006	900.00	0.00	900.00
2007	900.00	63.33	836.67
2008	900.00	72.50	827.50
2009	900.00	71.12	828.88
2010	900.00	0.00	900.00
2011	900.00	8.13	891.87
2012	900.00	61.85	838.15
2013	900.00	75.00	825.00
2014	900.00	300.00	600.00
2015	900.00	200.00	700.00
2016	900.00	0.00	900.00
19 Year average	900.00	45.49	854.51

