			1		1	1			AGENDA ITEM 15b
Water Convention Alt					Where to store the		Additional	Additional	
	Alternative Name from Master List	Description	Focus Area	Water Source(s)	Where to store the water	Intended use(s)	Additional treatment required	Additional infrastructure	Outstanding issues
		Use graywater for your landscape; minimize irrigation requirements; minimize lawns/design in							
		patios.		Decentralized	Rainwater	irrigation (non-			
WCA-01	Markowitz: Landscaping, Capture, Re-use	Rainwater to go into the house/building for domestic, non-potable use.	Demand	(rainwater, graywater)	catchments	potable)	No	No	
		Form a working group to consider building code revisions that include onsite water systems. These would go that go beyond the California Building Code, so that new buildings are highly water-							
		efficient and can capture and re-use water onsite. The City can pass an ordinance requiring		Conservation		irrigation (non-			
WCA-02	SCDA: Conservation Building Codes	efficient fixtures in existing buildings.	Demand	(mandated)	NA	potable)	No	No	
		Implement a water demand offset program, where developers fund conservation retrofits elsewhere in the system to offset the new demand for water created by the							
		development. The City needs to prevent growth from eroding our drought security by adopting a							
		waterneutral growth policy in which developers fund conservation programs that aren't already		Conservation		Potable or			
WCA-03	SCDA: Water-Neutral Development	funded by ratepayers.	Demand	(mandated)	NA	nonpotable	No	No	
		The software organizes water use information to help engage customers, and allows customer-							
		specific responses by staff. WaterSmart software analyzes billing data to disaggregate indoor and							
		outdoor usage, lot size, home characteristics, location, the impact of weather and seasons, and							
WCA-04	WaterSmart: Home Water Reports	any efficiency measures installed as part of a conservation program. Comparisons are made with other similar customers but no physical measures or incentives are delivered.	Demand	Conservation (voluntary)	NΔ	Potable or nonnotable	No	No	
*******	Water Smart. From C Water Reports		Demand	(1000000)					Water rights (new diversion location from which to fill the reservoir, routing of
		This alternative for initial comparison uses only the Liddell quarry which would hold about 650							fill pipeline), geotechnical and construction issues associated with installing a
		million gallons (MG) since its construction would not require building a dam. The San Vicente site was dropped since the San Mateo Peninsula Open Space Trust and the Sempervirens Fund have							liner on steep slopes over a porous karst formation, preparation and approval of environmental documents, California Department of Fish and Wildlife (CDFW)
		acquired the site and initiated creation of a conservation easement over the site to prevent future						Pumping stations,	and National Marine Fisheries Service (NMFS) approvals for water diversions
		development. If the City withdrew stored water over a 3-year drought cycle, production would be			New surface	Potable or		Ranney collectors,	from streams with salmonoid populations, and agreements with the landowner
WCA-05	Bevirt: North Coast Water	about 200 MG annually after allowing for evaporation and leakage losses.	Storage	Winter flows	reservoirs	nonpotable	No	pipeline	about ownership and operations .
									determine the final treatment train (MF would need pretreatment ahead of MF for elevated SLR turbidity concentration), preparation and approval of
									environmental documents, determination if water rights and diversion permits
									would need modifications, and development of a plan to store and use diverted
		This alternative for initial comparison would add a new 14-mgd water treatment plant (WTP) (pretreatment for turbidity control and membrane filtration) near the Tait Street Diversion to							water beneficially. If the City would have excess water during normal or wet years, it might transfer extra water to Soquel Creek Water District (SqCWD)
		produce treated water that would be piped directly into the distribution system. The write up for							and/or Scotts Valley Water District (SVWD) but doing so would require
		this alternative indicates that the alternative would allow an annual water diversion increase of							agreements with the agencies and likely would trigger water rights permit
WCA-06	McKinney: Expanded Treatment Capacity	about 560 MG.	Supply	Winter flows	Loch Lomond, Other	Potable	Yes	Pumping station	modifications since the place of use would change. the City would need to conduct additional analyses for available flow, addressing
		Use Ranney collectors with a 12.9-mgd capacity (maximum capacity allowed under the current							any bypass requirements under the habitat conservation plan. The City would
		City of Santa Cruz [City] diversion permit), installed near the City's Felton diversion to draw water							also need to determine its plan to store and use diverted water beneficially. If
		allocated under the City's existing water rights. Water drawn through the collectors would have greatly reduced turbidity. Much higher water quality would allow continuous refilling of Loch							the City would have excess water during normal or wet years, the City might transfer extra water to Soquel Creek Water District (SqCWD) and/or Scotts
		Lomond while also operating the GHWTP. More studies would be required to project increased							Valley Water District (SVWD) but doing so would require agreements with the
		diversion opportunity, however the increased diversion likely would be somewhat less than about			Loch Lomond, GW				agencies and likely would trigger water rights permit modifications since the
WCA-07	McKinney: Ranney Collectors on SLR	560 MG annually as projected for McKinney: Expanded Treatment Capacity	Supply	Winter flows	recharge, other	Potable	No	Ranney collectors	place of use would change.
		Use treated water sold by the City to Soquel Creek County Water District (SqCWD) during normal							
		and wet years. SqCWD would use the transferred water either for groundwater recharge through							
		seven 250-gallon-per-minute (gpm) recharge wells, for conjunctive use (well field resting) recharge, or both. The City would take more water from its San Lorenzo River and/or Newell Creek							
		diversions, about 2.5 million gallons per day (mgd) or about 915 MG annually, to match the							
		desalination alternative. If recharge occurred continuously for five years, total transferred water							
		would be about 4,600 MG. Facilities would include Ranney collectors at the Felton Diversion, to insure that the Graham Hill Water Treatment Plant (GHWTP) could treat the diverted water							
		continuously. During drought years the City would receive returned water (groundwater) from							
		SqCWD. The City also would pump its Tait Street wells year round since the recharged Purisima							
		aquifer would yield available water without causing seawater intrusion. Potential yield would be 2 mgd from the Live Oak wells and 2.5 mgd from SqCWD; 4.5 mgd total. If the City used these						Pumping stations,	Water rights (modification of place of use), assembling appropriate information to site injection wells, modeling the Purisima aquifer to project better potential
		sources for six months, total production, after deducting out a 1-mgd production allowance for the			Loch Lomond, GW			Ranney collectors,	performance, and agreement with SqCWD on how the alternative's water would
WCA-08	Paul: (13) The Lochquifer Alternatives	existing wells, would be about 640 MG annually.	Supply	Winter flows	recharge, other	Potable	No	pipeline	be conveyed, shared and paid for.
		produce filtered dicinfected officent (CA Title 22 uprostricted upter) from the Cit. Westerness			1				
		produce filtered disinfected effluent (CA Title 22 unrestricted water) from the City Wastewater Treatment Plant (WWTP) at a rate of about 4.3 mgd. The City would pump the effluent north			1				
		through a new pipeline aligned along the railroad right of way, with turnouts to irrigate up to about	:		1				
		1,300 acres on private land and leased land on properties owned by the California State Parks			1				Legal agreements with CSP, BLM, and property owners and with irrigators,
		(CSP) and the United States Bureau of Land Management (BLM),. This process is assumed to take place over 180 days per year and total water available for crop irrigation would be about 780 MG.			1			Line maintenance	securing the right of way for the new delivery and return pipelines such as along the railroad ROW, geotechnical investigations for well construction, assessment
		The City would build 12 new 250-gpm extraction wells that discharge into new pipeline that in turn			1			facility, delivery	of the groundwater basin to ensure that operation would not adversely affect
		would connect to the existing City North Coast pipeline. The water would combine with diverted			1			pipeline, extraction	the groundwater basin, permitting through the California Coastal Commission,
		surface water from the City North Coast rights, for treatment at the GHWTP. To develop space for new facilities within the WWTP site. the City would need to relocate its Line Maintenance Facility		Wastewater	1	irrigation (non-		wells, return pipeline, storage	preparation and approval of CEQA/NEPA documents (NEPA is included because the project includes BLM land), and location and purchase of new Line
WCA-09	Ripley: Reuse for agriculture	from the WWTP site to a new site on the West Side.	Supply	effluent/groundwater	Aquifer	potable)	Yes	reservoir	Maintenance Facility site.
		have the same components as "Paul Lochquifer" but the recharge and return rates would be lower. This alternative would transfer about 800 MG from the City to SqCWD over an extended period	-		1				water rights (modification of place of use), assembling appropriate information
		but SqCWD would return only about 145 MG to the City during dry years. The City's drought			1			Pumping stations,	to site injection wells, modeling the Purisima aquifer to project better potential
		production from its Live Oak wells would increase from 1 mgd to 2 mgd, or about 365 MG. The			Loch Lomond, GW	Exchanges with		Ranney collectors,	performance, and agreement with SqCWD on how the alternative's water would
WCA-10	SCDA: Regional Aquifer Restoration	long-term average approximate production increase appears to be [(145+365)/6.5] = 78 MG.	Supply	Winter flows	recharge, other	neighboring systems	No	pipeline	be conveyed, shared and paid for.

		Produce complete advance treatment (CAT) water from the City Wastewater Treatment Plant (WWTP) at a rate of about 3.7 mgd. The City would pump the CAT water from the WWTP through a new pipeline to the Bay street Reservoirs site where the new pipeline would connect to the existing North Coast pipeline. The combined water would flow to the inlet end of the GHWTP, to be treated and distributed to the City. This alternative would produce up to about 1350 MG annually.						Pumping station,	
		The City would have the option of selling surplus treated water to either SqCWD or Scotts Valley Water District as part of either a conjunctive use (aquifer resting) or ASR project.						pipeline, relocated City Sewer line maintenance facility	permitting such reuse through CA Division of Drinking Water, gaining public
WCA-11	SCWD: Water Reuse	To develop space for new facilities within the WWTP site, the City would need to relocate its Line Maintenance Facility from the WWTP site to a new site on the West Side.	Supply	Wastewater effluent	Loch Lomond, GW recharge, other	Potable	Yes	from WWTP to another site	acceptance for adding CAT water as part of its potable water supply, and possibly reaching agreements with adjacent agencies.
			,		- containing of the containing of				29.00.00.00.00.00.00.00.00.00.00.00.00.00
WCA-12	SustainableWaterCoalition: Desalination	Use seawater desalting through a new reverse osmosis desalination facility to produce about 2.5 mgd for addition to the City potable water supply. Annual production would be about 915 MG. This alternative's components and development would match those for the previously proposed scwd2 desalination facility. For comparison with other alternatives, BC has assumed that the City would own and operate the facility and would use the water produced year round. Excess water would allow the City to either idle the Live Oak wells for conjunctive use aquifer recover to perhaps undertake Live Oak well operation in an ASR mode to restore the aquifer more rapidly.	Supply	Seawater	GW recharge, other	Potable	Yes	Marine intake and pipeline, onshore pumping station, desal facillity, brine storage and brind disposal pipeline	Environmental document completion, permitting through the California Coastal Commission, and public vote approving alternative implementation.
								Offshore sea water intake, pipelines, and pumping station, Trevi	Trevi technology is still in its infancy and being tested at a pilot scale. As described, it would require a lower grade heat source for separately drawing the
WCA-13	Trevi: Forward Osmosis Desalination	Use seawater desalting through a Trevi forward osmosis (FO) system. This alternative's other components would match those for seawater desalting.	Supply	Seawater or recycled water	GW recharge, other	Potable	Yes	process site, brine return pipeline	solution from the potable water but the alternative description did not designate a source for lower grade heat.
		Advance regional restructuring by bringing together contiguous water districts to facilitate a comprehensive vision and policy for groundwater planning, management, and resource	Institutional/Adm						
WCA-14	Gratz: Regional Water Authority	conservation	inistration	NA	NA	NA	NA	NA	
		a County-wide, regional District which would have a similar role as the Santa Clara Valley Water Critict, SCVWD, has with all water retailers in Santa Clara County. Just like SCVWD, this District would wholesale recycled water, manage ground water, water storage reservoirs, and recreational	Institutional/Adm						
WCA-15	Smallman: Regional Water Authority	areas	inistration	NA	NA	NA	NA	NA	
WCA-16	Gratz: Maximize Conservation Behavior	Use the WaterSmart Software	Demand	Conservation (voluntary)	NA	Potable or nonpotable	No	No	
			Demand	Conservation	NA	Potable or	N-	No	
WCA-17	Holt: Rate-Driven Conservation Behavior	Use rate incrases to strengthen water wavings Coordinate with Soquel Creek, Scotts Valley, and San Lorenzo Valley to address the water shortage		(voluntary)	NA	nonpotable	No	NO	
WCA-18	McGilvray: (10) Regional Collaboration	issues in the region	inistration	NA	NA	NA	NA	NA	
								Marine intake and pipeline, onshore pumping station, desal facillity, brine storage and brind	Environmental document completion, permitting through the California Coastal
WCA-19	McGilvray: (11) Seawater Desal	Same as desal alternative	Supply	Seawater Conservation	GW recharge, other	Potable Potable or	Yes	disposal pipeline	Commission, and public vote approving alternative implementation.
WCA-20	McGilvray: (9) Implement Conservation	Implement the Santa Cruz Master Conservation Plan	Demand	(voluntary)	NA	nonpotable	No	No	
		Proposes a number of recommendations, including promoting climate-appropriate landscaping, offering free graywater and rainwater evaluations, increase rebate incentives to convert lawns and shrub spray irrigation heads, price landscape water at Block 3 raes, use water budgets for all		Decentralized	Rainwater	irrigation (non-			
WCA-21	SCDA: Climate Appropriate Landscape	landscape accounts, and revise the water budget allotments	Demand		catchments	potable)	No	No	
		Educate and empower the citizenry to use water in way that works for the whole community, including the wildlife, thereby diminishing or eliminating the need for mandatory curtailment. Partner with schools and community organizations to do hands-on watershed restoration work and teach water conservation practices such as rainwater catchment, graywater recycling, climate-		Conservation		Potable or			
WCA-22	SCDA: Conservation Education	appropriate landscaping, and safe use of composting toilets.	Demand	(voluntary)	NA	nonpotable	No	No	
WCA-23	SCDA: Conservation Pricing	Price water to encourage conservation	Demand	Conservation (voluntary)	NA	Potable or nonpotable	No	No	
		The City will establish a policy of timely demand management in response to dry conditions that				Potable or			
WCA-24 WCA-25	SCDA: Demand Management During Droughts Scott: Composting Toilets	will enable adequate storage for future dry years Compost public toilets	Demand Demand	Conservation (other) Conservation (other)	NA NA	nonpotable Nonpotable	No No	No No	
WCA-26		Build an off-stream storage reservoir located on state land north of the existing City landfall 3 miles west of the city		Winter flows	New surface	Potable or	No		
WCA-26	Fieberling: Expand Storage	west of the city. Use judicious measures to capture and manage excess San Lorenzo River runoff coupled with adequate storage. Storage options: 1) Finlarge storage capacity of Loch Lomond reservoir 2) Water swaps with neighboring water agencies 3) Groundwater recharge as storage 4) Use abandomed quarries	Storage	Winter flows	reservoirs	nonpotable	NO		
WCA-27	Malone: Enhanced Storage and Recharge	5) Build new dams, for example: Zayante Creek, Waterman Gap.	Storage	Winter flows	Loch Lomond, Other	Potable			
WCA-28	Malone: Regional Water Exchanges	The City would help Soquel Creek recharge its aquifer to the point where, during extreme low rain years, Soquel Creek could ship some of its groundwater to Santa Cruz to help cope with a drought for the country of the control of the country of th	Storage	Winter flows	Loch Lomond, GW recharge, other				
WCA-29	Malone: Stormwater Capture	Capture some of the excess runoff in these extremely high runoff years using a variety of smaller storage options	Storage	Stormwater					
WCA-30	McGilvray: (2) Quarries for Water Storage	Use former quarries, such as Hansen Quarry, Eastern Cemex quarry, and/or Granite Sand Quarry at Dimeo dump for raw water storage.	Storage	Winter flows	New surface reservoirs	Potable or nonpotable	No		
WCA-31	McGilvray: (3) Water Capture and Transfers	Capture San Lorenzo winter flow, send to SV, SqCWD or storage	Storage	Winter flows					
WCA-32	SCWD: Zayante Dam and Reservoir	Build a dam on Zayante Creek to create the Zyante Reservoir to store winter flows	Storage	Winter flows	New surface reservoirs	Potable or nonpotable	No	dam, pump station, pipe	
WCA-33	Smallman: Reservoirs	As an alternative to the Zayante Dam, which would harm fish habitat, Smallman proposes to create four additional reservoirs. In some cases this involves building a different dam	Storage	Winter flows	New surface reservoirs	Potable or nonpotable	No		
WCA-34	Smallman: Storm Aquarries	Remodel the existing Zayante Diversion Dam on the San Lorenzo River so that it collects mainly heavy storm water flows, rather than the lower flow, clear water as it does now Using a top-down, science-based, what does it take, and include the neighbors strategy for	Storage	Winter flows	New surface reservoirs	Potable or nonpotable	No	Ranney collectors, pipe, dam, leach fields	
WCA-35	Paul: (1-10,22) Foundation Strategies	Gaing a top-own, science-upon and conservation alternatives. Consider water quantities, energy/elevation, costs, lifetimes, and regulatory buy-ins.	Strategies	NA	NA	NA	No	No	

		Build desal with a smaller footprint, less power demand, less capital, no pretreatment, no						
		membranes, high raw water intake. The AQUEOUS System (AQ500K) is NOT a membrane based						
		system, but a closed recycling thermal dynamic system using increasing pressure that reaches						
		significant temperatures causing the molecular level separation of gas, liquids and solids via a			Aquifer storage if			
WCA-36	Aqueous: Desalination (non-membrane)	multiphase process that is extraordinarily efficient.	Supply	Seawater	needed	Potable	?	?
					Aquifer storage if			
WCA-37	Brown: Zero-emission Wave Energy	Converts ocean wave energy into zero-emission electricity and desalinated water	Supply	Seawater	needed	Potable	?	?
		Dew Point's Water harvesting generators continuously simulate the "Dew Point" thus transforms			Storage likely not	irrigation (non-		
WCA-38	DewPoint: Atmospheric Water Generation	the limitless water vapor in the air and condenses it into safe, clean water	Supply	Moist air	needed.	potable)	No	Yes
				Decentralized				
WCA-39	Garges: Residential Gray-water	Reuse water from showers and bathtubs for sanitation and irrigation	Demand	(rainwater, graywater)	NA	Nonpotable	No	No
								Line maintenance
								facility, delivery
								pipeline, extraction
								wells, return
				Recycled	Storage possibly not	irrigation (non-		pipeline, storage
CA-40	Gratz: Recycled Water for Irrigation	use recycled water for irrigation	Supply	water/groundwater	needed.	potable)	Yes	reservoir
								Line maintenance
								facility, delivery
								pipeline, extraction
								wells, return
					Storage possibly not	irrigation (non-		pipeline, storage
CA-41	McGilvray: (1) Recycled Water for Irrigation	Use 30 MG of recycled water per year	Supply	Recycled water	needed.	potable)	Yes	reservoir
		Add 2nd pipeline to Loch Lomond. Obtain permission to take water direct from Felton diversion.				Potable or		
CA-42	McGilvray: (4,5) Upgrade Water Treatment	Use a better settling agent	Supply	Winter flows	Loch Lomond	nonpotable	Yes	
					Ag irrigation and/or			
CA-43	McGilvray: (6,7) Pipelines Along RR Line	Install on RR right of way Santa Cruz to Watsonville.	Supply	Recycled water	GW recharge	GW recharge	Yes	
-								Line maintenance
			1					facility, delivery
			1					pipeline, extraction
			1					wells, return
			1			irrigation (non-		pipeline, storage
CA-44	McGilvray: (8) Tertriary Treatment, Re-use	Enlarge tertiary water treatment capacity at Neary Lagoon wastewater treatment plant	Supply	Recycled water	Groundwater	potable)	Yes	reservoir
			1		1			
		Develop new groundwater resources can diversify the City of Santa Cruz potable water supply.						
		Wells located in the alluvium adjacent to the San Lorenzo River at the Felton Diversion, Coast						
		Pump Station, and Tait Street well field can provide a reduced turbidity supply during periods of						
		high runoff. Wells coupled with satellite water treatment plants in portions of the distribution						
		system where water age affects water quality can increase supply modestly, reduce water waste,						
		and improve quality. Sites for satellite production include the Branciforte service area, Carbonera						
		Tank, Tanner Heights, Harvey West, University service infrastructure, Wilder Ranch, North Coast						
		brackish sources, Lompico Formation on the North Coast, and the North Coast Recirculation Pump				Potable or		
/CA-45	McKinney: Additional Wells and WTPs	Station.	Supply	Groundwater	Groundwater	nonpotable	Yes	new satellite WTPs
		Repurpose existing infrastructure to effectively deliver Reclaimed Water from the City of Santa						Line maintenance
		Cruz's Wastewater Treatment Facility (SCWWTF) to augment the SLR. Several alternatives,						facility, delivery
		including expanding reclaimed water filtration capacity at WWTP, building a new tertiary						pipeline, extraction
		treatment plant off site a Coast Pump Station or Bay Street reservoir, or Build a Tertiary water				Stream		wells, return
		main up Bay Street to the Bay Street Reservoir and tie into existing coast main or repurpose Scotts				augmentation,		pipeline, storage
CA-46	McKinney: Water Reuse	Valley WWTP effluent main for reclaimed water supply line.	Supply	Recycled water		potable	Yes	reservoir
		Make use of our existing diversion facilities at Felton and/or Tait Street by using the multipurpose						
CA-47	Paul: (11) Multi-purpose Settling Ponds	settling pond to remove turbidity.	Supply	Winter flows		GW recharge	No	Settling pond
	Paul: (12) Diversion Alternatives	To capture turbid winter flows, use diversions such as ranney collectors, infiltration galleries, or		Winter flows	Loch Lomond, GW			
CA-48	. , ,	casing path wells	Supply	Winter flows	recharge, other		Yes	Possibly
		Expand existing 6" SCWD/SqCWD intertie now by increasing pipe diameter to 18" for a short	1					
		distance; get emergency or temporary permit; install a bi-directional variable-speed lowpressure	1					
CA 40	David (4 4) Unamed a Wester 11 11	inline pump to control water transfer capacity of at least 2000 AFY; capture an extra 300 to 500	Connection	14/1-4				
CA-49	Paul: (14) Upgrade Water Intertie	AFY this winter. Re-apply for rights each winter during tide-over	Supply	Winter flows	1			
			1					
		Cross-County Pipeline conveys <6000 AFY of raw water to Loch Lomond from some or all streams	1					
		between the San Lorenzo River just above Boulder Creek and Soquel Creek, inclusive, and possibly	1					
		Bear Creek and Aptos Creek. It includes diversions from some or all of said streams, and can	1					
		augment any of the streams when needed for fish habitat. Diversion equipment would inherently	1					
		filter out turbidity. The Pipeline would store winter water in Loch Lomond, then distribute Loch	1					
		water throughout the year to the participating aquifer-dependent water districts, who in turn can	1			L		
		rest their wells to recharge aquifers very quickly. A new water treatment plant would be built in the	-			Stream		New WTP, pipeline,
** 50	D1-(45) C C	vicinity of the Loch or Scotts Valley to serve participating water districts primarily by gravity,	Connection	14/1-4	Loch Lomond, GW	augmentation,		Ranney Collectors
CA-50	Paul: (15) Cross-County Pipeline	possibly generating hydroelectricity in the process	Supply	Winter flows	recharge, other	potable	No	(or other diversions)
		pumping water from the bottom of the range to the top of the range to significantly enhance the				Stream		
CA-51	Paul: (16) Water Looping	stream flow in that range of the stream for a few weeks out of the year	Supply	1	1	augmentation	INO	pipeline
	Devil (47) Describe Tale Co.	Construct a detention tub string to hold reclaimed water long enough so that it can be treated as	Connection	Daniel ad	data-sels-s-1	D-4-bl-		
A-52	Paul: (17) Detention Tub String	potable	Supply	Recycled water	detention tub	Potable		
		Create a boom in fish populations by raising the water depth by a few inches or feet in crucial	1					
		segments of streams at times of year crucial for fish. The program would be administered by fish	L					
CA-53	Paul: (18) Weir Systems	biologists using inexpensive computer-controlled weirs	Supply					
		Eco-sensitively re-route a stream to the next canyon, to make an off-stream reservoir out of its	1					
		original canyon. Uses fish-friendly Ranney collector or infiltration gallery to filter turbidity out of	1					
		the water being placed in the reservoir, so reservoir will not silt up and its water will be pre-treated	l,		New surface			
CA-54	Paul: (19) Stream Relocation	so as to be more pure for dry-season stream augmentation and human use	Supply	Winter flows	reservoirs	Potable	No	Ranney collectors
		Pump alluvial wellwater from Tait Street to Felton in either a water-looping scheme (See Sec. 16)	1					
		or in a simple effort to stimulate and support fish migration by increasing the flow from Felton to	1			Stream		
CA-55	Paul: (20) SLR Alluvial Plain Wells	the sea	Supply	Groundwater		augmentation	No	
		Promote a regional Groundwater Management/Reclamation District to incentivize conservation	1					
		among private well owners, and to gain their financial participation in groundwater recharge	1					
							1	
/CA-56	Paul: (21) Groundwater Rights Mgt	projects	Supply					

		Divert winter water using equipment which would substantially de-turbidify the water by making it							
		filter down through stream beds. The water would come from streams at elevations comparable							
		to or higher than those of Loch Lomond Reservoir, for the reasons stated in the previous							
		paragraph. A new 8 mgd treatment plant near the Loch would insure that when the diverted water							
		is added to the Loch, it meets excellent quality standards. Throughout the year, the new treatment							
		plant would also treat Loch water on its way down to participating agencies, which would shut off							
		their wells and thus let their aquifers recharge very quickly. The name "Loch-Down" originates							
		from how it features water flowing downhill, generating hydroelectricityinstead of consuming							
		energy required to pump uphill, as is done currently from Felton to the Loch. Larger diversions can							
		be achieved without enlarging the treatment plant, but merely by adding a simple buffer pond							
WCA-57	Paul: (23) Loch-Down Alternatives	and/or some pipeline	Supply	Winter flows			Yes		
		Construct a pipeline through Henry Cowell State Park along the existing railroad right-of-way, and							
		install a subsurface diversion device such as a Ranney collector at Felton to filter out turbidity,						Pipeline, Ranney	
WCA-58	Paul: (24) Cowell Railroad Pipeline	increase capacity and save energy	Supply	Winter flows			Yes	collector	
	· ·	City conduct an evaluation of the cost, benefit, feasibility and environmental impact of the							
		following: aquifer recharge with potable water, aquifer recharge on North Coast, adding new							
		treatment facility (possibly at Bay St. Reservoir), wells to tap Santa Margarita Aquifer in Live Oak							
		area, relocate the main San Lorenzo River diversion upstream, accelerate the replacement of old							
WCA-59	SCDA: Enhance Existing Infrastructure	pipes in the distribution system	Supply	Winter flows			7	7	
110133	Sebit Emance Existing initiate accord	City should conduct a cost/benefit analysis of funding stormwater infiltration projects in	Supply	Winter nows					
		groundwater recharge zones							
		000							
		City convene a joint effort with Scotts Valley Water District and San Lorenzo Valley Water District							
		to contract with the California Conservation Corps to engage in watershed restoration, including							
		restoration of roads; storm water infiltration projects; and partnering with schools and community							
WCA-60	SCDA: Watershed Restoration	groups to do restoration	Supply	Stormwater					
WCA-60	SCDA. Watershed Restoration	groups to do restoration	Supply	Storniwater					
		Set up conservation savings accounts for water customers to increase the incentive for them to							
WCA-61	Constitution Constitution Constitution Assessment	install water saving improvements. This account will accrue money from a percentage of the	Demand						
WCA-61	Smallman: Conservation Savings Accounts	billing. The water agency shall also apply for grants for this program to help build these accounts	Demand						
								Treatment plant,	
								pipeline,	
		Build and Advanced Treated Recycled Water Treatment Plant at the corner of Delaware				potable or		transmission mains,	
WCA-62	Smallman: Recycled Water	Avenue and Natural Bridges Drive	Supply	Wastewater effluent		nonpotable	Yes	injection wells	
		This alternative is similar to the "Storm Aquarry Plan", but treats the water immediately to a							
		potable degree, rather storing partially treated water into reservoirs. the potable water would be							
		injected directly into the distribution system, or go to storage facilities replacing water that is							
WCA-63	Smallman: Water Skate Parks	normally drafted from the ground water basin	Supply	Stormwater					
						Potable or			
WCA-64	Weisz: Water recycling	Treat wastewater effluent to potable drinking standards	Supply	Recycled water		nonpotable	Yes	Yes	
		Offer a rebate for water efficient technologies and retrofit (WET&R) projects using 3 years of public		Conservation		Potable or			
WCA-65	zNano: Conservation rebate program	financing	Demand	(voluntary)	NA	nonpotable	No	No	
		Through rebates, encourage homeowners or businesses to install zNano water treatment		Decentralized					
WCA-66	zNano: On-site Water Re-use	appliances to reuse water in the home or business. These appliances help recover waste water	Demand	(rainwater, graywater)	NA	nonpotable	No	No	
WCA-67	Tanaka	Convert waste plastic into fuel to provide an energy source for desal							
		Program C is defined in Table 4 of the MWM TM dated 9/30/2014. It includes a side variety of							
		water conservation/efficiency measures, some mandated, some incentivized through rebates and							
		some using public and customer outreach and/or communication to encouraged changed		Conservation		Potable or			
WCA-68	plan	behavior.	Demand	(voluntary)	NA	nonpotable	No	No	
		Develop programs to decrease peak season demands through peak reduction or peak-demand		Conservation		Potable or			
WCA-69	SCWD: Peak season reductions - 10%, 25% and 50%	shifting	Demand	(mandated/voluntary)	NA	nonpotable	No	No	
		Use commercially produced recycling systems in new residential construction and possibly							
		retrofitted into existing residential units. The units would traated gray water to supply treated for							
		toilet flushing and dry season landscape irrigation. Installation could include single family, condo,		Decentralized					
WCA-70	Home Water Recycling	and multi-family units.	Demand	(rainwater, graywater)	NA	Nonpotable	No	No	
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