#### Summary of Responses to RWMP Comments Received

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1	To.   `	Comment Date	Commented by	Organization / Function	Document	Section	Page No.	Comment	Response	Themes
	1	1/4/2012	Christopher McKinnon	Mar Vista Community Council	GWR	Executive Summary		Seems to be missing	Page ES-11 was inadvertantly ommitted from the original documents. In subsequent versions, the page was restored and distributed with the entire GWR planning document.	Technical Details
	2	1/4/2012	Christopher McKinnon	Mar Vista Community Council	GWR	Executive Summary	ES-15	Paragraph 1 - Is there an explanation of the selection of Site 2 DCT Southwest for AWPF?	The explanation for the site selection in the Executive Summary starts on Page ES-8, AWPF Site Selection. The information is explained further in Section 3.6 of the GWR Master Planning Report. The detailed information about the site selection process is included in Appendix F, Site Assessment TM.	Technical Details
	3	1/4/2012	Christopher McKinnon	Mar Vista Community Council	GWR	Executive Summary	ES-19	Paragraph 6 - Some explanation of how Recycled Water is physically injected would be helpful.	The injection of recycled water would be through wells similar to groundwater production wells. The screens of the injection wells would be below the water table.  The following text was added to the GWR Master Planning Report Section 7.3.2 and ES.7:  "Injection wells are similar to groundwater production wells and have screens below the water table. The pressure in the existing delivery system would move the water down the injection wells where it exits into the groundwater basin through the screened zones."  Additional details on injection wells are also included in the GW Replenishment Evaluation TM, Appendix J Section 3, Figure 3-14.	Technical Details
	4	1/4/2012	Christopher McKinnon	Mar Vista Community Council	GWR	Executive Summary	ES-23	Paragraph 2 - Please consider electricity for the building and RO etc to be provided from Solar Panels or other renewable energy sources	Once the project moves forward, the team will evaluate the costs and benefits of using renewable energy sources for powering the facilities. Additional text was added to Sections 8 and ES.8.  Additional text about further evaluation of renewable energy sources during preliminary design was added to Section 8.5.3 and ES.8: Section 8.5.3: This section describes the proposed electrical system for the AWPF. These options will be investigated further during the design phase of the project, as well as an evaluation of the costs and benefits of using renewable energy sources for powering the facilities.  Section ES.8, Electrical Considerations: The electrical system for the AWPF will be investigated further during the design phase of the project, which will include an evaluation of the costs and benefits of using renewable energy sources for powering the facilities.	Technical Details

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	5	1/4/2012	Christopher McKinnon	Mar Vista Community Council	GWR	Executive Summary	ES-29	Paragraph 1 Mora actimate hydret details for these line items should be made as an appendix if	More detail on the costs are included in the GWR Master Planning Report Appendix B, Opinion of Probable Cost and Appendix C - Cost Basis, Section 2.2 - Cost Continguencis and Factors. For planning studies, typical project contingencies can range between 20% and 50% for construction cost estimates.  Please reference Section 2.2.2 - "Implementation Factors" of the Cost Basis TM for further information on implementation costs.	Rates, Costs, & Financing
	6	1/4/2012	Christopher McKinnon	Mar Vista Community Council	NPR	4. Market Assessment	4-6	Paragraph 2 - Add to the Potential Target Customers - Westside Service Area all City owned facilities including but not limited to LAFD Station 5 at LAX and FS 62 Mar Vista on Venice Blvd. LAPD Pacific Division on Culver Blvd. Mar Vista Library on Venice Blvd. US Post Office on Venice Blvd.	The alignment for recycled water pipeline (purple pipe) is conditional on securing target customers with demands of greater than 50 AFY. Potential customers with less than 5 AFY, such as the ones described in the comment, could also be linked to the purple pipe network once those larger customers were secured and a pipeline is constructed in the area to deliver the recycled water.	Technical Details
	7	1/18/2012	John S. Lang	South Shores Homeowners Association	Pilot	0. General	0-0		Ozone Peroxide is being carried forward to be evaluated for the future facility design.  We agree that it demonstrated some advantages over UV/peroxide and should be considered for the future facility.	Technical Details
	8	1/18/2012	John S. Lang	South Shores Homeowners Association	Pilot	0. General	0-0	is improved by having upstream membrane process (Ultra-filtration and RO). This point is well taken However it may be the case that an Ozone Perovide AOP can provide increased membrane	West Basin Municipal Water District is currently designing a pre-ozonation system prior to its microfiltration process. Preliminary pilot testing indicated that NDMA formation could be a concern. We will continue to monitor the West Basin project to confirm the benefits and potential drawbacks of this alternative.	Technical Details

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							Finally, I am going to discuss Ozonation. Recent work by Mazzi reports essentially instantaneous and complete Ozone transfer via ultra fine bubbles produced by a venturi. My efforts to understand how this works have led me to posit that the rate of gas to liquid transfer is inversely proportional to the cube of mean gas bubble diameter. A semi-formal qualitative analysis of this follows:  Gas Diffusion Within A Bubble – At constant diffusion velocity, the travel time of a molecule		
							from the interior of a bubble to the gas-liquid interface decreases in inverse proportion to bubble diameter, i.e. the shorter the distance, the faster the time to travel that distance.  Gas Diffusion Through The Gas-Liquid Interface – The ratio of gas volume in a bubble to the		
							bubble surface area, i.e. the G/L interface is inversely proportional to bubble diameter. Thus in a smaller bubble each gas molecule sees a steeper diffusion gradient through the G/L interface because it has fewer gas molecules nearby to offer competition and because the diffusion gradient into the liquid phase at the bubble surface is steeper (see below).  Gas Diffusion Into The Liquid Phase – The steepness of the gas concentration gradient in the		
							liquid adjacent to a gas bubble is inversely proportional to bubble diameter. This is due to curvature of the bubbles surface. Imagine a gas molecule that has just passed through the G/L interface. It is in the laminar flow boundary layer around the gas bubble so no turbulent flow acts on the molecule. The only force acting to move the gas molecule is diffusion that impels it to move towards lower dissolved gas concentrations in the liquid phase. If another gas molecule has just passed through the G/L interface and the two molecules are in line of sight of each other, then by virtue of that proximity, the local dissolved gas concentration is raised and the diffusion gradient is lowered. If the second gas molecule is below the horizon of the gas bubble when viewed from the first gas molecule, then the local dissolved gas concentration is not effected. As the diameter of the gas bubble becomes smaller the distance to the perceived horizon of a gas molecule hovering just above the bubble surface shrinks.		
9	1/18/2012	John S. Lang	South Shores Homeowners Association	Pilot	0. General			Please note that the pilot report recommended further evaluation of ozone alternatives before any decisions can be made regarding the future full-scale facility.	Technical Details
							This analysis suggests that each of the individual steps in the Gas-/Liquid transfer process is inversely proportional to the mean diameter of the gas bubbles. Thus the overall process should be inversely proportional to the cube of the diameter, a conclusion that explained Mazzi's Ozone transfer observations.		
							The rapid and efficient gas transfer leads to two effects that are at times unwanted. The first is that the currently mandated 2 minute Ozone Contact time is not necessary for effecting complete transfer. The second is that, in addition to Ozone, it is possible to transfer enough of the carrying gas to supersaturate the Ozonated water stream. In cases where supersaturation is not advisable, Mazzi recommends running the Ozonated water stream through a centrifuge to remove the excess carrier gas bubbles. This process works, but uses a lot of energy.		
							My company's (New Environmental Engineering, Inc.) gas injector is currently in Patent review so I can discuss it. It is a variant of our line of rapid mixers with a gas eductor fitted to the tip the the deflector plate. In essence it is a venturi turned inside out. As water flows around the injector, rather than through it, a single injector can be placed in a conduit and it will handle an entire flow stream. It can be scaled from pilot size up to a capacity of several hundred MGD. A small side stream (3 to 5%) of the main flow is pressurized by a centrifugal pump. The side stream is directed to flow over the gas eductor at high velocity where it pulls a vacuum in the same manner		
							as an ordinary venturi. The intense shear produce by the side stream produces micro bubbles that are then forced by the deflector plate laterally across the conduit so that the gas is mixed into the entire flow stream within a length of one conduit diameter, or less, downstream from the injector. The mixing action is close to ideal plug flow.		
							I have recently conceived of a way to deal with the issues on mandatory ozone contact time and supersaturation in one step in a plug flow reactor. As this idea has not yet been submitted to the USPTO, I cannot go into details at this time, but hope to be able to do so later should there be an interest.		

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1	0	1/18/2012	John S. Lang	South Shores Homeowners Association	Overall	General	0-0	THE COUNTY OF LOS ANGELES  The City and the County of Los Angeles govern separate areas that are interwoven in a highly complex manner. An effective Master Plan for Recycled Water should deal with the needs of our desert as a whole. I did not see any proposals for getting the City and the County to work together in the Master Plan. One glaring example of disunity is that the L.A. County Sanitation District is planing to build a new effluent tunnel from the JEPCP plant in Wilmington to the existing ocean outfall at Royal Palms Beach in San Pedro. This tunnel will help institutionalize dumping recyclable water into the ocean, as well as squander funds that could be used for recycling. I do not have any suggestions on addressing this issue, my skills are technical not political, but I hope that the authors of the Master Plan will find a way to call attention to the need for area wide cooperation.	The City has been working with the County Public Works throughout the master planning process. The County's Hansen and Pacoima spreading basins are an integral part of the City's plan to implement a GWR program. The City has also identified over 30 County facilities as potential NPR customers.  During the development of the RWMP Long Term Concepts Report, the City held meetings with the Los Angeles County Sanitation Districts (LACSD) and the Metropolitan Water District of Southern California (MWD) wherein a Joint Groundwater Replenishment Study being proposed by the LACSD and MWD was discussed. The study's purpose is to evaluate the feasibility of a regional groundwater replenishment program to purify treated wastewater. Currently, this treated wastewater is discharged to the Pacific Ocean from LACSD's Joint Water Pollution Control Plant in Carson. The recycled water volume being contemplated for this program is similar in size to the long-term maximum reuse goal for the City.  With similar size regional plans, LACSD and the City are aware of the potential for "competition" for storage and water augmentation space in the local groundwater basins. Future planning by the City, MWD and LACSD will see continued cooperation to implement the most practical, regional approach to recycled water supply throughout the Los Angeles Basin.	Interagency Collaboration
1	1	2/6/2012	Jack Humphreville	Greater Wilshire Neighborhood	Overall	General	0-0	We can not make any judgements until we have a better understanding of the impact on rates.	LADWP is evaluating the recycled water program's potential impacts on water rates. Although we have capital and O&M expenses that are estimated over the 50-year life cycle of the program, equating these costs to a rate increase over the life of the program is complicated and requires extensive evaluation with the LADWP Rates Group. In addition, assumptions need to be made as to how the program is to be financed using both borrowed money and cash (pay-as-you go) and which percentage of each is most appropriate.  We are currently putting together a comprehensive Rate plan for the entire Water System. Once this is completed we will be able to evaluate the best method of financing for the recycled water program moving forward to minimize rate impacts to our customers. We work on establishing the necessary funds to support the recycled water program each quarter and in an ongoing basis in relationship to the rest of the budget.	Rates, Costs, & Financing
1	2	2/6/2012	Jack Humphreville	Greater Wilshire Neighborhood	Overall	General	0-0		Since the onset of the program in the mid 1970's, capital investment for our Recycled Water Program totals approximately \$235 million through June 2011. Moving forward, the total capital cost of the recycled water program, including the Potential GWR Project plus Planned and Potential NPR projects, is approximately \$900 million. (\$874 million if injection wells are not installed for the GWR project and \$910 million if injection wells are installed)	Rates, Costs, & Financing
1	3	2/6/2012	Jack Humphreville	Greater Wilshire Neighborhood	Overall	General	0-0	while there is lots of great information, it is too much. We need a concise summary of the	The City has prepared a series of summary documents to assist the reader in reviewing the RWMP. Each document includes its own executive summary. In addition, a three page fact sheet summarizes the content of these documents. Finally, an overall executive summary will assist readers in understanding the content of these documents.	Complexity of Information
1	.4	2/6/2012	Jack Humphreville	Neighborhood	Overall	General	0-0	DWP has done an excellent job of educating us via the RWAG. We have open and candid discussions.	Thank you for the comment. The City appreciates your participation in the RWAG and looks forward to your continued involvement.	Public Outreach
1	.5	2/6/2012	Jack Humphreville	Greater Wilshire Neighborhood	Overall	General	0-0	Visits to the spreading grounds and other locations is very good.	Thank you for the comment.	Public Outreach

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16	2/6/2012	Jack Humphreville	Greater Wilshire Neighborhood	Overall	General	0-0	What is the financial arrangement with sanitation? Is DWP being overcharged?	BOS is responsible for covering all treatment costs to produce secondary or tertiary treated water in order to meet discharge permit requirements for the Water Reclamation Plants. The only exception is the Advanced Water Treatment Facility (AWTF) at the Terminal Island Plant. BOS bills LADWP for the cost to operate the AWTF, LADWP reviews the costs, and reimburses BOS accordingly.	Rates, Costs, & Financing
17	2/6/2012	Jack Humphreville	Greater Wilshire Neighborhood	Overall	General	0-0	Is DWP contracting out the projects? Or is it relying on DWP work crews?	This decision will be made once the project proceeds to construction. As of September 2012, the project is in the early planning phase.	Rates, Costs, & Financing
18	2/6/2012	Jack Humphreville	Greater Wilshire Neighborhood	Overall	General	0-0	The methodology comparing rates between recycled water and MWD is flawed. The cross over is way out there.	Recycled water programs are long-term investments that incur high capital costs at their inception due to regulatory compliance, permitting, and construction of infrastructure/facilities. A separate financial analysis was performed in which the recycled water program costs were amortized to lessen the financial burden for current ratepayers by extending the costs over a longer period of time versus a pay-as-you-go method.  Since any local water supplies developed by LADWP would offset MWD purchases, it is appropriate to compare costs of purchased water with costs to further develop a recycled water program.	Rates, Costs, & Financing
19	2/8/2012	Christopher McKinnon	Mar Vista Community Council	Overall	General	0-0		The City has prepared a series of summary documents to assist the reader in reviewing the RWMP. Each document includes its own executive summary. In addition, a three page fact sheet summarizes the content of these documents. Finally, an overall executive summary will assist readers in understanding the content of these documents.	Public Outreach Complexity of Information
20	2/8/2012	Christopher McKinnon	Mar Vista Community Council	Overall	General	0-0	I hope that for such a relatively modest initial total acre feet of Recycled Water that this Plan could be easily and economically scaled upward so as to set goals for 100's of thousands of acre feet in the near future.	The Long-Term Concepts Report includes conceptual planning for large-scale GWR projects that could potentially be implemented after the near-term goal of 59,000 AFY is achieved by 2035. The largest of these project concepts considers recharge of up to 180,000 AFY of recycled water from Hyperion Treatment Plant for groundwater replenishment.	Technical Details
21	2/8/2012	Christopher McKinnon	Mar Vista Community Council	Overall	General	0-0	My further wish is that in addition to spreading ground and irrigation that some reference could be given in these documents to the goal of recycling wastewater for direct potable use as well.	The Recycled Water Master Planning effort included a parallel investigation of conceptual direct potable projects that could potentially be implemented in lieu of other long-term recycled water projects.	Technical Details
22	2/9/2012	Ken Murray, M.D.	Providence St. Joseph Medical Center	GWR	2. Public Outreach	2-1		The outreach efforts are ongoing. Previous activities were to gain focused feedback during the planning phase to prepare the RWMP documents. The intent was not to do full public outreach, but rather focused stakeholder outreach. The City hopes to eventually build trust with the public and achieve public understanding of recycled water through continued engagement activities.	Technical Details

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							Below table 2-1 it says: "As a result of an aggressive and active public engagement process, considerable progress has been made" NO. Only towards checking off the list, NOT towards engaging the community! The reality is that only a VERY SMALL percent of the community is being made aware of this effort. It is great to have politician support. But the minute that they perceive that the public opposes this, that support will evaporate instantly. I am sure that this approach is taken with the best of intentions, but it is VASTLY inadequate! I have attended numerous public talks on the topic of water, such as at RAND, where the topic of recycled water has come up. NO ONE from LADWP was in attendance. They should not only be there, they should be up on the podium!	The outreach efforts are ongoing. The City's desire is to continue to build trust with the public and to achieve public understanding of recycled water through continued engagement activities.	
23	2/9/2012	Ken Murray, M.D.	Providence St. Joseph Medical Center	GWR	2. Public Outreach	2-1	There are a number of public forums in this city, that get wide audiences. LADWP should sponsor programs/speakers/authors on the subject, and GET THE TOPIC ON THE RADAR SCREEN! Such places as Zocalo Public Square, Aloud at the LA public library, UCLA Public Affairs, many bookstores. The outstanding book ELIXIR by Brian Fagan, on the history of water, would be a good starting point for discussion. Sponsor a speaker to talk to every group within the Sierra Club, they are always looking for speakers. Set up meetings with environmental groups, home owners groups, recreation groups, fraternal groups, private clubs. When I google LADWP Recycled Water, I get a short page, with no links. What is up with that?????	As of February 2012, efforts have been to approach and engage select stakeholder groups during the planning phase and development of the RWMP documents. The City has begun to engage the public and will continue to do so at a greater level through the development of the recycled water program. The RWMP documents equip us with the right strategies to approach the public.  The statement below GWR Report Table 2-1 will be rephrased to state: "As a result of aggressive and active stakeholder engagement during preliminary planning, considerable progress has been made."	Public Outreach
							Here is the opportunity to educate!! How many hits have there been on that page?  Do you know??? You have to poll the public. You have to have some focus groups. The "speakers corps" has to be the best kept secret in the city! As far as I know, the RWAG doesn't know about it. Your web page has to have a list of events, and there needs to be an event EVERY WEEK. It doesn't have to be YOUR event. Orange Counties, RANDs, anyone's is fine. This is a great technical document, nothing short of the excellence that i'd expect. But it will fail, miserably, if early widespread public engagement is not PUSHED. If you wait for them to come to you, it will all crash down, and no one is more sorry than I. 10.1.1 will not get it done.	In addition, the LADWP website is being overhauled and will launch soon. The webpage on recycled water is also scheduled to be updated.	
2-2	2/9/2012	Ken Murray, M.D.	Providence St. Joseph Medical Center	GWR	10. Implementation Strategy	10-3	figure 10-1 says it all. This feels way way too underaggressive. I understand why things are being done as they are, but I think there should be contingencies for speeding things up. I would hope that things are done in phase I, that will allow phase II to be built more easily, rather than tearing down the buildings built in phase I to build phase II (don't laugh, I've seen it done). There is NOTHING happening for a lot of years after the completion of phase I, and that seems crazy. The water situation will progressively get worse, there can be no doubt. We need to get ahead of the curve. When we see that this works, we should be squeezing every oz of water out of recycling, as other sources dry upand they will. I would have liked to have seen something more visionary in addition to what I know has to be there.	There are three factors effecting the implementation timeline for Phase 2: 1) availability of funding, 2) availability of water, and 3) regulatory compliance.  The conceptual design for the Phase 1 AWPF was done with Phase 2 in mind For example, all of the structures would be constructed during Phase 1, and then only additional equipment would need to be added as part of the Phase 2 expansion to increase the capacity from 15,000 AFY up to 30,000 AFY.  Phase 1 of the GWR project is to offset imported water by 15,000 AFY by 2022.  Phase 2 of the GWR project is to offset imported water up to an additional 15,000 AFY by 2035. Phase 1 must occur in order to accomplish Phase 2.  A key planning parameter for GWR was the amount of water that could be treated in the AWPF considering the amount of incoming wastewater (influent) to DCT WRP and other demands for recycled water. In addition, for Phase 1, all of the water can be replenished through surface spreading at the Hansen Spreading Grounds (HSG). For additional replenishment required in Phase 2, both the HSG and Pacoima Spreading Grounds (PSG) would be used.  California Department of Public Health regulates blending requirements for GWR. Blending requirements depend on the level of treatment applied to recycled water. Because the amount of stormwater available for blending is limited, it is important to first aim to achieve 15,000 AFY to meet regulations. CDPH GWR regulations are being revised, and this may afford LADWP an opportunity to pursue potential alternative options to what is laid out in the GWR Master Planning Report scenario. The GWR scenario that has been thoroughly analyzed and evaluated in the RWMP documents represents the most conservative path. In addition, before we get regulatory approval to increase RWC, we must ensure that the project meets all aspects of the extensive monitoring and reporting program established as a part of Phase 1.	Timeline/Scope

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2	5 2/9/2	/2012	Ken Murray, M.D.	Providence St. Joseph Medical Center	GWR	0. General	0-0	somehow, this form, with the checkoff of agree, etc, which is clearly designed to generate a statistic demonstrating support to someone, just bothers me. There is a difference between a show of support, and actual support. It feels like someone has to be shown there is public support, whether or not there is. It makes me sad.  Addendum: since I wrote the above, yesterday, I attended a panel discussion at Zocalo Public Square this evening. One of the panelists was Ron Nichols, as one might say, leading from the top. He was highly effective. Unfortunately, he was speaking about solar energy. I had a nice	True, the check off options on the comment form are designed to generate statistics for both support and opposition. It is a definable way to clearly capture input from those that who oppose and support recycled water initiatives.  In addition, the City has provided alternative methods to receive more in-depth feedback, including transcribing public comments from hearings, collecting letters, emails, postcards, written and verbal statements. This process develops a base of support to guide the strategies being developed in the RWMP documents.  Thank you for sharing your positive experience with Ron Nichols.	Public Outreach
2	6 2/10/2	)/2012	Caryn Mandelbaum	Environment Now	GWR	Executive Summary	ES-3	Generally, the report limits the production of reclaimed water to 59,000 AF when we have recommended higher benchmarks from the start of the RWAG. We have consistently recommended upgrading Hyperion to advanced treatment and including that resource in the reclaimed water plans. You claim to fold our input into the report, but you do not reflect our objections to extending timelines and reducing volume benchmarks	The goals in the RWMP documents are based on the 2010 Urban Water Management Plan (UWMP). The City supports maximizing the use of Recycled Water. As noted in the GWR Executive Summary, the plans call for investing approximately \$900 million to reach 59,000 AFY by 2035. Given the current rate structure and budget situation of the LADWP, funding a more aggressive recycled water implementation schedule requires additional evaluation. As of September 2012, LADWP is evaluating strategies to accelerate the development and implementation of the local water supply program, including water recycling, water conservation, and stormwater capture, and to expedite the cleanup of the San Fernando Groundwater Basin. The Los Angeles Department of Water and Power Board of Commissioners (Board) is expected to hear a resolution on this issue on October 4, 2012.  Plans to utilize water from the Hyperion Treatment Plant (HTP) are discussed in the Long Term Concepts Report (LTCR) which includes projects over and above the initial 59,000 AFY. These Long-term projects will produce and reuse up to 180,000 AFY for additional groundwater replenishment. Such considerations as topography, regulatory hurdles, and the need for extensive proximate infrastructure are major factors affecting feasibility.	Timeline/Scope Technical Details
2	7 2/10/2	/2012	Caryn Mandelbaum	Environment Now	GWR	Executive Summary	ES-6	Generally, you fail to discuss the potential for purple pipe development and/or groundwater recharge in the Southwest parts of the City near Hyperion. We sat on the Recycled Water Advisory Group, which includes purple pipe and groundwater replenishment, not GWR alone. You have failed to address our interests in purple pipe in this report.	The potential for purple pipe development (or Non Potable Reuse) is discussed in the Non Potable Reuse report. Groundwater Replenishment (GWR) using recycled water from Hyperion is discussed in the Long Term Concepts Report. Plans to utilize water from the Hyperion Treatment Plant (HTP) are discussed in the Long Term Concepts Report (LTCR) which includes projects over and above the initial 59,000 AFY. These Long-term projects will produce and reuse up to 180,000 AFY for additional groundwater replenishment.	Timeline/Scope
2	8 2/10/2	)/2012	Caryn Mandelbaum	Environment Now	GWR	Executive Summary	ES-6	Your distinction b/w the City's May 2008 Water Supply Action Plan the overriding 2010 UWMP is misleading and disingenuous. The 2008 Plan called for 50,000 AFY by 2019, included upgrades of Hyperion, and build out of purple pipe. The 2010 UWMP extends this timeline by 16 years and fails to consider the Hyperion upgrade and purple pipe extension. At the rate you propose Phase 1 by 2022, you will be 35 TAF and 3 years behind. You need to be honest in this distinction.	The distinction between the City's 2008 Water Supply Action Plan and the 2010 Urban Water Management Plan was not intended to be misleading or disingenuous. The UWMP reflects realities of funding limitations that were not addressed in the 2008 document. Water rate increases, are required to achieve even the revised projections in the UWMP. To clarify, the 2008 document did not include upgrades to the Hyperion Treatment Plant. The RWMP documents do not consider Hyperion upgrades either, except in the Long Term Concepts Report for options beyond 2035. As described in the response to Comment #26, there are considerable barriers that affect the feasibility of effectively distributing recycled water from Hyperion for use in Los Angeles. Given current funding limitations, the most cost effective way for the City to utilize this Hyperion resource is through partnerships with other agencies.  The City currently provides an average of 36,000 AFY of water from the Hyperion Plant for reuse through a partnership with the West Basin Municipal Water District. This allows the City to actively support local supply reliability in the region.	Timeline/Scope

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29	2/10/2012	Caryn Mandelbaum	Environment Now	GWR	Executive Summary	No.	If the Phase 2 project has a greater capacity why are you not prioritizing it? You would get a jumpstart on the Phase 1 aspect of remediating Hansen SP if you prioritized Phase 2. You should explain the obstacles, at the least.	There are three factors effecting the implementation timeline for Phase 2: 1) availability of funding, 2) availability of water, and 3) regulation compliance.  Phase 1 of the GWR project is to offset imported water by 15,000 AFY by 2022.  Phase 2 of the GWR project is to offset imported water up to an additional 15,000 AFY by 2035. Phase 1 must occur in order to accomplish Phase 2.  A key planning parameter for GWR was the amount of water that could be treated in the AWPF considering the amount of incoming wastewater (influent) to DCT WRP and other demands for recycled water. In addition, for Phase 1, all of the water can be replenished through surface spreading at the Hansen Spreading Grounds (HSG). For additional replenishment required in Phase 2, both the HSG and Pacoima Spreading Grounds (PSG) would be used. It is likely that injection wells would also be needed.  California Department of Public Health regulates blending requirements for GWR. Blending requirements depend on the level of treatment applied to recycled water. Advanced treated recycled water can, over time, have the amount of diluent water for blending reduced to zero. Because the amount of stormwater available for blending is limited, it is important to first aim to achieve 15,000 AFY to meet regulations. CDPH GWR regulations are being revised, and this may afford LADWP an opportunity to pursue potential alternative options to what is laid out in the GWR Master Planning Report scenario. The GWR scenario that has been thoroughly analyzed and evaluated in the RWMP documents represents the most conservative path.	Timeline/Scope
30	2/10/2012	Caryn Mandelbaum	Environment Now	GWR	Executive Summary	ES-20	Where/what is TSG? I don't see the acronym defined. And which criteria are you talking about? You do not explain.	TSG stands for Tujunga Spreading Grounds, which will be spelled out in the text and can be found in the contents section of the GWR report. (GWR Report Executive Summary, p. ES-21)  The sentence that refers to the regulatory criteria was modified as follows: The 2008 draft groundwater recharge regulations permit an increase in the RWC up to 100 percent subject to demonstration of successful compliance with certain regulatory criteria including: 1) the 20-week total organic carbon (TOC) average in recycled water for a one year period must equal 0.5 mg/L divided by the proposed maximum RWC; 2) demonstration that monitoring wells have received specified percentages of recycled water for at least six months and twelve months; and 3) review by an expert panel.during the initial operating years.  Please refer to GWR Report Sections 9.2 Permitting Review and 9.3 Monitoring.	Technical Details
31	2/10/2012	Caryn Mandelbaum	Environment Now	GWR	Executive Summary	ES-24	You are missing timelines on the permitting processes throughout. This suggests an expectation not to succeed. At least give a range. You give yourself some cover when you assert permitting timelines. One date in July 2035 is not enough. You need regular benchmarks for each step.	Timelines are shown for the permitting process. See GWR Report Table 9-3 for the estimated CEQA/NEPA schedule and GWR Report Figure 10-1 for the overall implementation plan, which shows the permitting steps and associated timeline.	Technical Details
32	2/10/2012	Caryn Mandelbaum	Environment Now	GWR	Executive Summary	ES-24	Your numbers do not add up to 59,000. You have 15K, 30K, and 29K. Provide better accounting please.	The total potable water offset of 59,000 AFY by 2035 will be achieved with 30,000 AFY of GWR and 29,000 AFY of NPR (30,000 + 29,000 = 59,000 AFY).  The GWR project is envisioned to be implemented in two steps: 15,000 AFY initially and then expanded by another 15,000 AFY to achieve the total of 30,000 AFY GWR.	Technical Details

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3	33	2/10/2012	Caryn Mandelbaum	Environment Now	GWR	Executive Summary	ES-25	Why do you plan to start Phase 2 so late (2029)? It's hard to believe that it will take 17 years from today to complete Phase 1 yielding 15TAF, but only 6 years to complete Phase 2 yielding 30TAF	Phase 1 will deliver 15,000 AFY of recycled water via groundwater spreading by 2022. Phase 1 includes all structures necessary for full buildout, as well as capacity to supply NPR customers. Phase 2 will add capacity to increase recharge up to an additional 15,000 AFY.  There are three factors effecting the implementation timeline for Phase 2: 1) availability of funding, 2) availability of water, and 3) regulatory compliance.  The conceptual design for the Phase 1 AWPF was done with Phase 2 in mind For example, all of the structures would be constructed during Phase 1, and then only additional equipment would need to be added as part of the Phase 2 expansion to increase the capacity from 15,000 AFY up to 30,000 AFY.  Phase 1 of the GWR project is to offset imported water by 15,000 AFY by 2022. Phase 2 of the GWR project is to offset imported water up to an additional 15,000 AFY by 2035. Phase 1 must occur in order to accomplish Phase 2.  A key planning parameter for GWR was the amount of water that could be treated in the AWPF considering the amount of incoming wastewater (influent) to DCT WRP and other demands for recycled water. In addition, for Phase 1, all of the water can be replenished through surface spreading at the Hansen Spreading Grounds (HSG). For additional replenishment required in Phase 2, both the HSG and Pacoima Spreading Grounds (PSG) would be used. It is likely that injection wells would also be needed.	Technical Details Timeline/Scope
3	34	2/10/2012	Caryn Mandelbaum	Environment Now	GWR	Executive Summary	ES-29		In the GWR Report, Section 11.2.1.1 notes that this is a conservative assumption: "Based on current MWD rate projections through 2018 (averages 5% per year), historical rate increases (through 2012), and an assumed 5% annual growth from 2019 on, the future MWD Tier 1 rates were forecasted. In comparison with historical increases from MWD, as shown in Figure 8.1, this is conservative."	Rates, Costs, & Financing
3	35	2/10/2012	Caryn Mandelbaum	Environment Now	GWR	0. General	0-0		Thank you for the comment. It is the City's intent to provide adequate responses to address stakeholder concerns regarding the City's recycled water initiatives. Public and stakeholder support is critical to achieving the City's recycled water objectives. The City supports and sees the importance of expanding recycled water. Local water supply such as recycled water is essential for securing a reliable water supply for the future.	Public Outreach
3	36	2/10/2012	Kirsten James	Heal the Bay	Overall	General	0-0	We strongly support the expansion of the recycled water system and a commitment to move towards a more sustainable water supply.	Thank you for the comment.	Public Outreach
3	37	2/10/2012	Kirsten James	Heal the Bay	Overall	General	0-0	As discussed in previous comments, we are very concerned that the recycled water targets continue to slip. When the RWAG started, the goal was 50,000 AF by 2019. Then it slipped to 50,000 AF by 2029. In these documents it appears to have further relaxed to 39,650 AF of new recycled water use by 2035. We have more than enough available supply of treated water from the City's four POTWs. This is an unacceptable trend and does not support the goal of a sustainable water supply for Los Angeles. Of note, the footnote #1 on the GWR Executive Summary should reflect these changes instead of implying that the goal was increased.	Given LADWP's current rate structure and budget situation, funding a more aggressive recycled water implementation schedule requires additional evaluation. As of September 2012, LADWP is evaluating strategies to accelerate the development and implementation of the local water supply program, including water recycling, water conservation, and stormwater capture, and to expedite the cleanup of the San Fernando Groundwater Basin. The Los Angeles Department of Water and Power Board of Commissioners (Board) is expected to hear a resolution on this issue on October 4, 2012.  Although water supply is available from the City's four POTWs, there are considerable barriers that affect the feasibility of distributing recycled water from the Hyperion Treatment Plant for use in Los Angeles. This is discussed further in the responses to Comments # 26 and #28. To ensure that the change to recycled water goals are clearly explained, we revised the first part of Footnote #1 on Figure ES-5 of the GWR Executive Summary as follows: "The original recycled water goal for the RWMP was 50,000 AFY by 2019, which was established before the completion of the 2010 UWMP. The recycled water goal was revised to 59,000 AFY by 2035 with the issuance of the 2010 UWMP. The UWMP reflects realities of funding limitations that were not addressed in the 2008 Water Supply Action Plan. Water rate increases, are required to achieve even the revised projections in the UWMP."	Timeline/Scope

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38	2/10/2012	Kirsten James	Heal the Bay	Overall	General	0-0	The documents include two milestone dates: 2035 and 2085. There is a large gap of time before and in-between dates. For planning purposes, it would make sense to include interim milestones with targets.	The year 2085 is not a milestone, but the bookend to a 50-year planning period which begins in 2035 after achieving the near-term goal of 59,000 AFY. The Long-Term Concepts Report (LTCR) includes conceptual planning for large-scale GWR projects that could potentially be implemented after the year 2035. The long-term concept projects include some level of phasing based on reaching 90 and 100 percent milestones to offset MWD imported water supply. If these projects are implemented, interim-level phasing could be applied during the facilities planning and design steps.	Technical Details
								Groundwater model simulations were conducted to assess the potential change in groundwater levels in the vicinity of the HSG due to spreading under various recharge scenarios. The model results indicate that, while HSG has the percolation capacity to accept more than 15,000 AFY of recycled water, the underlying aquifer system may not have the capacity to transmit flows much in excess of 31,800 AFY without excessive groundwater mounding because of a nearby downstream geologic fault. Excessive mounding can bring groundwater levels very close to the surface and greatly reduce percolation capacity. Based on historic volumes over 40 years and factoring in recent improvements to the spreading facilities, it is assumed the County will spread an average of 16,800 AFY of stormwater at the Hansen Spreading Grounds (HSG). Phase I of the GWR project will add another 15,000 AFY for a total of 32,000 AFY to be spread at HSG.	
								Therefore, recharge of recycled water greater than 15,000 AFY is not proposed for the HSG. (Please see GWR Report Section 7.2 and Section ES.7)	
								Phase 1 will deliver 15,000 AFY of recycled water via groundwater spreading by 2022. Phase 1 includes all structures necessary for full buildout, as well as capacity to supply NPR customers. Phase 2 will add capacity to increase recharge up to an additional 15,000 AFY.	
								There are three factors effecting the implementation timeline for Phase 2: 1) availability of funding, 2) availability of water, and 3) regulatory compliance.	
								The conceptual design for the Phase 1 AWPF was done with Phase 2 in mind For example, all of the structures would be constructed during Phase 1, and then only additional equipment would need to be added as part of the Phase 2 expansion to increase the capacity from 15,000 AFY to 30,000 AFY.	
								Phase 1 of the GWR project is to offset imported water by 15,000 AFY by 2022.  Phase 2 of the GWR project is to offset imported water a total of 30,000 AFY by 2035.  Phase 1 must occur in order to accomplish Phase 2.	

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39	2/10/2012	Kirsten James	Heal the Bay	Overall	General	0-0		Updates were made to GWR Section 7.2 and ES.7.  The following text was added to GWR Section ES.7:  Use of HSG alone is not sufficient to allow GWR of 30,000 AFY for Phase 2. The use of stormwater for replenishment at the LACDPW spreading grounds is the first priority and based on historic volumes and recent improvements, it is assumed LACDPW will spread an average of 16,800 AFY of stormwater at HSG. Phase 1 of the GWR project will add another 15,000 AFY for a total of 31,800 AFY to be spread at HSG. Groundwater model results indicate that, while HSG has the percolation capacity to accept more than 15,000 AFY of recycled water, the underlying aquifer system may not have the capacity to transmit flows much in excess of 31,800 AFY without excessive groundwater mounding because of a fault downgradient of HSG (approximately at San Fernando Road). Mounding could bring groundwater levels very close to the surface and greatly reduce percolation capacity, as well as the potential to adversely impact operations at the nearby Bradley Landfill. Therefore, recharge of recycled water greater than 15,000 AFY is not proposed for the HSG and the use of both the HSG and the PSG is necessary to increase GWR in Phase 2.	Technical Details
								The following text was added to GWR Section 7.2:  The use of stormwater for replenishment at the LACDPW spreading grounds is the first priority. Based on historic volumes over 40 years and factoring in recent improvements to the spreading facilities, it is assumed LACDPW will spread an average of 16,800 AFY of stormwater at HSG. Phase 1 of the GWR project will add another 15,000 AFY for a total of 31,800 AFY to be spread at HSG. Groundwater model simulations were conducted to assess the potential change in groundwater levels in the vicinity of the HSG due to spreading under various recharge scenarios. The model results indicate that, while HSG has the percolation capacity to accept more than 15,000 AFY of recycled water, the underlying aquifer system may not have the capacity to transmit flows much in excess of 31,800 AFY without excessive groundwater mounding because of a fault downgradient of HSG (approximately at San Fernando Road). These hydrogeologic conditions may cause excessive groundwater mounding in the HSG area if GWR flow is increased much above the Phase 1 condition of 15,000 AFY. Mounding could bring groundwater levels very close to the surface and greatly reduce percolation capacity, as well as the potential to adversely impact operations at the nearby Bradley Landfill. Therefore, recharge of recycled water greater than 15,000 AFY is not proposed for the HSG and the use of both the HSG and the PSG is necessary to increase GWR in Phase 2.	
40	2/10/2012	Kirsten James	Heal the Bay	Overall	General	0-0	The reports show that the NPR and GWR program costs are signficantly less than imported water. The reports mention that the "program will be done concurrently as funding is available." What is LADWP doing to plan for funding of these projects. It is critical that funding to implement these place is considered when revisiting the LADWP bydget and a proposed rate increase. Also it is	There are different ways to pay for projects. Options evaluated in the RWMP documents range from "Pay-As-You-Go" (no borrowing) to financing a majority of the capital costs using borrowed funds.  Implementing the RWMP strategies by either financing method to achieve 59,000 AFY will cost less than purchasing imported water from MWD over the life of the project, providing a long-term rate benefit to our customers. LADWP will use the financing options for the recycled water program in an effort to reduce shorter term impacts to customers' water rates.	Rates, Costs, & Financing
41	2/10/2012	Kirsten James	Heal the Bay	Overall	General	0-0	milestones	The LADWP Urban Water Management Plan is the overall guiding document for water supply and resources management consistent with the City's goals and policy objectives. The UWMP provides an integrated framework to meet the City's water needs through enhanced water conservation, stormwater capture, and recycling projects to increase supply reliability.	Technical Details

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42	2/10/2012	Kirsten James	Heal the Bay	LTC	Executive Summary	ES-12		The Groundwater Replenishment Evaluation TM (GWR Report, Appendix J) determined that Tujunga Spreading Grounds has a potential spreading capacity of 36,100 AFY. Subtracting out the average expected annual stormwater infiltration of 7,600 AFY leaves approximately 28,500 AFY of remaining capacity.	Technical Details
43	2/10/2012	Kirsten James	Heal the Bay	Overall	General	0-0	How did LADWP determine the volume split between GWR and NPR?	The integrated alternatives analysis concluded that more GWR (Alternative 3) is most beneficial, since this alternative performs better than alternatives with less GWR in terms of capital costs and project implementation. Therefore, this GWR Master Planning Report is based on achieving a GWR goal of 30,000 AFY – the maximum amount of GWR that can be served by DCTWRP and the most conservative project size from a planning perspective. When combined with 30,000 GWR, 9,650 AFY of NPR projects are needed so that when added to the 19,350 AFY of existing and planned NPR demands the City will achieve the overall goal of 59,000 AFY by 2035.  To allow for the most flexibility for implementation, the NPR Master Planning Report identifies over 18,000 AFY of potential NPR projects. NPR projects that are most feasible considering cost and other important criteria will be the ones pursued.  The City relies on a mix of GWR and NPR projects to meet its goals, and has the flexibility to adjust the amount of GWR eventually implemented. As the recycled water program develops, the City can revisit the multi-criteria comparison of GWR and NPR to determine whether the GWR project should be expanded by an additional 15,000 AFY or less. If Phase 2 is less than 15,000 AFY, then more NPR projects would be implemented to achieve the goal of 59,000 AFY by 2035.  Source: GWR MP, Section ES.3 Planning Parameters, p ES-8.	
44	2/10/2012	Kirsten James	Heal the Bay	LTC	Executive Summary	ES-19	How did LADWP determine the weighting system in the LTC Report? "Reduction in Imported Water" seems low	The weightings for the LTCR were assigned based on discussions between LADWP, BOS, and the consultant team. "Reduction in Imported Water" was part of the "Achieve Supply & Operational Goals" objective which received a 20% weighting, relatively high compared to other objectives. In addition, the City conducted a weighting exercise with RWAG participants that resulted in other weighting schemes. The results of this exercise are discussed in more detail in Setion 5.2.3 - Sensitivity Analysis.	Technical Details
45	2/10/2012	Kirsten James	Heal the Bay	Overall	General	0-0	We support the long term goal of 100% offset of MWD imported water. Again, how does stormwater capture/reuse and increased conservation fit into this strategy?	The 2010 Urban Water Management Plan outlines the methods in which LADWP will significantly enhance water conservation, stormwater capture and recycling projects to increase supply reliability in order to meet the City's water needs while maximizing local resources and minimizing the need to import water.  LADWP has set a water conservation goal to further reduce potable water demands an additional 64,000 AFY by 2035. This aggressive approach includes multiple strategies: investments in state-of-the-art technology; rebates and incentives promoting installation of weather-based irrigation controllers (WBICs), efficient clothes washers and urinals; expansion and enforcement of prohibited water use; reductions in outdoor water uses; and extending education and outreach efforts.  The 2010 UWMP projects that the stormwater capture can potentially provide increased groundwater pumping rights in the San Fernando Basin of 15,000 AFY from groundwater recharge using captured stormwater, and 10,000 AFY of additional water conservation from capture and reuse solutions such as rain barrels and cisterns, for a total of 25,000 AFY by FY 2034/35. A Stormwater Capture Master Plan is being prepared and will comprehensively evaluate stormwater capture potential within the City.	Technical Details

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46	2/13/2012	Bill Hopkins	Granada Hills North Neighborhood Council	Overall	General	0-0	The LADWP ratepayers need to know the effect of these strategies on their water bill, with a contrasting amount to indicate what their cost would be without these strategies, i.e., using imported water	Thank you for your comment. The RWMP documents state the total costs of the recycled water program. Information on rate impacts and financial comparisons is beyond the scope of the RWMP documents. As the financing options are more defined, the LADWP will be able to provide information on rate impacts and comparisons to the ratepayers.	Rates, Costs, & Financing
47	2/16/2012	Rebecca Drayse	TreePeople	Overall	General	0-0	We don't want to hold you up so we are not going to submit comments but we do agree with the comments submitted by Heal the Bay. TreePeople will continue to work with the Green LA Coalition to help secure the rate increases DWP needs to implement the recycled water plan.	Thank you for your comment.	Rates, Costs, & Financing
48	2/3/2012	Tony Wilkinson	Neighborhood Council MOU Oversight Committee	Overall	Executive Summary	ES-29	GWR ES-29: Table ES-12; Note 2: The labor is not included in the O&M. Labor costs should be quantified and /or qualified as a percentage of the total O&M costs if not significant.	Labor costs are now included in the O&M. Please see revised Tables ES-12, 11-5 and 11-6 in the GWR Master Planning Report.	Rates, Costs, & Financing
49	2/3/2012	Tony Wilkinson	Neighborhood Council MOU Oversight Committee	Overall	Executive Summary	ES-6	Cost of Groundwater Cleanup on page GWR ES-6: We need to add language to clarify that GWR will not proceed until GW Treatment complex is ready to move forward (Timelines must coincide)	Correct, language has been added to GWR ES-6 to clarify that GWR will not proceed until the San Fernando Basin Groundwater Treatment Complex moves forward.  A clarifying statement was added to both Sections 3.1 and ES.3:  At this time, it is anticipated that the construction of the GWR Project will proceed when the implementation of the San Fernando Basin Groundwater Treatment Complex moves forward.	Rates, Costs, & Financing
50	2/3/2012	Tony Wilkinson	Neighborhood Council MOU Oversight Committee	Overall	General	0-0	For public Understanding: clarify intent with Groundwater Treatment. Write it in simplified language.	LADWP will work to ensure that the public understands the City's groundwater treatment intent. Per the RWMP Fact Sheet, the following statement discusses implementation of the San Fernando Basin Groundwater Treatment Complex: "As we move forward in the planning process, other important factors affecting implementation include:  Implementation and schedule of a GWR project will consider scope, timing, and implementation of the San Fernando Basin Groundwater Treatment Complex, which will treat contamination in that basin."  In addition, references to LADWP plans to construct the San Fernando Basin Groundwater Treatment Complex can be found in the GWR Report under Sections ES.3, ES.7, 3.1, and 10.1.4  Water quality is an important and necessary consideration in all water management strategies and supply reliability. Due to the existing contamination in the San Fernando Groundwater Basin, the sustainability of groundwater production from the San Fernando Valley is contingent on completing groundwater treatment facilities. Similarly, the effectiveness of expanding the use of the San Fernando Basin through GWR and captured stormwater also depends on implementation of groundwater treatment.	Technical Details
51	2/3/2012	Tony Wilkinson	Neighborhood Council MOU Oversight Committee	Overall	General	0-0	we need to prepare Fact Sneets, Navigation 1001 and Summary	The City has prepared a series of summary documents to assist the reader in reviewing the RWMP. Each document includes its own executive summary. In addition, a three page fact sheet summarizes the content of these documents. Finally, an overall executive summary will assist readers in understanding the content of these documents.	
52	2/3/2012	Tony Wilkinson	Neighborhood Council MOU Oversight Committee	Overall	General	0-0	We need to develop MOU with BOS for transferring money to BOS for costs of operating AWPF.	The LADWP will develop an MOU with BOS regarding the construction and operation of the proposed AWPF at DCT. The MOU will identify the financial responsibility of both LADWP and BOS which will be in accordance with the City Charter.	