



● Report on IRP Stakeholder Forums and Online Survey

Summary

The purpose of this report is to provide summaries of the feedback received through the Integrated Resources Plan (IRP) Update Stakeholder Forums (Forums) and Online Survey, and to provide the Board copies of comment letters received regarding the draft IRP report. Letters received from member agencies by September 3, 2010 have been included in this report as Attachment 3, correspondence received at a later date will be provided to the Board at the September 14, 2010 Board Workshop. Additionally, this report outlines how comments received from stakeholders and member agencies through the Forums, Online Survey and/or through letters will be addressed in the final IRP report.

Attachments

[Attachment 1: IRP Stakeholder Forums Comment and Question Details](#)

[Attachment 2: IRP Online Survey Response Summary](#)

[Attachment 3: Comment Letters](#)

Detailed Report

Stakeholder Forums

A primary goal of the 2010 IRP Update is to incorporate the diverse needs and interests of stakeholders in the Metropolitan Water District of Southern California's (Metropolitan) service area. In order to meet that goal, the 2010 IRP Update was developed through an open and participatory process that involved Metropolitan member agencies, retail agencies, other water agencies, groundwater and wastewater managers, policy decision-makers, environmental entities, business leaders, community interests, and individual citizens.

The 2010 IRP Update outreach process began with a round of Stakeholder Forums in the fall of 2008. Four forums were held in the cities of Newport Beach, Ontario, Los Angeles, and San Diego, and the purpose was to gather ideas and input from diverse interests. Nearly 600 stakeholders participated in the half-day forums. The input received from attendees at the first round of forums served as a launching point for the Metropolitan Board and staff to embark on further data collection and analysis of various supply strategies. (A detailed report from the first round of forums is available on Metropolitan's website.)

In August 2010, a second round of the Stakeholder Forums provided a venue for Metropolitan to present the IRP's resource strategy and to hear stakeholder input and feedback. A total of 325 stakeholders attended the second round of forums. The forums were held at the following cities and dates:

1. Orange – August 3, 2010
2. Ontario – August 5, 2010
3. San Diego – August 10, 2010
4. Los Angeles – August 12, 2010

The following is an overview of the types of issues that will be addressed in the final IRP, as well as responses to frequently asked questions in each category. [Attachment 1](#) provides a detailed report of all the questions and comments received at each Stakeholder Forum. The ideas discussed at the second round of forums will be incorporated into the final report as appropriate.

Overview of Responses

Conservation

Questions and comments in the conservation category ranged from questions regarding future water conservation incentives to increasing the price of water to induce conservation. At every forum staff received questions relating to 20% by 2020 compliance and how current and future conservation savings are calculated.

Metropolitan staff will incorporate further explanations on the following topics into the final report, including:

- Explaining the difference between regional and retail compliance for 20% by 2020.
- Highlighting the multiple benefits of conservation including: reducing energy consumption and greenhouse gas emissions.
- Adding language on the water and energy nexus.
- Defining the commitment level to achieve the water use efficiency targets of the Core Resources Strategy and Buffer Supply.

Answers to the two most popular questions are provided below.

20% by 2020

Legislation enacted in 2008 requires urban retail water suppliers to develop urban water use targets to help meet the 20% reduction by 2020 in order to qualify for state water-related grants and loans. The proposed Core Resource Strategy encourages retail-level compliance with 20% by 2020 water use efficiency goals. Retail water suppliers receive partial credit for past efforts in conservation and recycled water; therefore, not all agencies need to reduce demand by 20 percent in order to comply with the law.

The legislation allows compliance on an individual agency basis or through collaboration with other agencies. Based on recommendations from the IRP Conservation Technical Workgroup and follow-up discussions with member agency representatives through the Long-Term Conservation Plan meetings, Metropolitan staff analyzed the amount of conservation that would be needed to comply with the requirements in the legislation. Metropolitan's analysis of population and demand, and the methodologies provided by the law showed that compliance with 20% by 2020 on an individual member agency basis summed into the entire region would result in a reduction of 380,000 AF of potable demands in 2020. However, reducing the current per capita potable demands by 20 percent when the Metropolitan service area is treated as one region would require an additional reduction of 200,000 AF.

Based on the two levels of compliance estimated by Metropolitan, it has been proposed that the retail-level of compliance be incorporated into the Core Resources Strategy, and that the additional 200,000 AF for regional-level compliance be part of the Uncertainty Buffer.

Projection Calculations

Future potable water savings are comprised of two parts, (1) conservation from existing devices, regulations and price effects and (2) a reduction from water conservation or recycled water programs that will be implemented by the year 2020. Future water savings are calculated through a conservation model that estimates water-savings from devices, the impact of regulations and the impact of increasing prices on water use.

Cost/Rates

The number of questions or comments received regarding cost/rates varied from forum to forum, with the majority received in San Diego. Based on input from the forums, staff will include the following in the final report:

- Information on how the plan protects the region's economic and social development.
- Expanded discussion on the cost assumptions.

Board Report (Report on IRP Stakeholder Forums and Online Survey)

- Information on how sensitive rates impacts are to different assumptions.
- Details on the cost impact to customers to fund the Uncertainty Buffer and Core Resources Strategy.
- Discussion of how the 2010 IRP strategy reduces the risk of over developing water supplies.
- Discussion of the risks associated with failing to meet demands.

Below are responses to some of the frequently asked questions in the category of costs and rates.

Conservation Impacts on Water Sales

While conservation decreases the amount of water that is sold annually and may increase upward pressure on water rates, it is important to recognize how conservation helps the region maintain reliable water supplies and ensures environmental stewardship. A discussion of the multiple benefits of water conservation will be incorporated into the IRP.

Rate Impacts from IRP Strategy Implementation

Additional information on costs and rate impacts presented to the IRP Steering Committee on August 17, 2010 and will be also be presented at the IRP Board Workshop on September 14, 2010. The section on cost and rate impacts will also be expanded in the final IRP. Supplementary explanation will be added to clarify that the supply proposed in the various IRP strategies will be implemented only after Board approval of individual projects, and that the estimated rate impacts are bookends of the minimum and maximum investments required to implement each strategy.

Delta

A few questions and comments were received concerning the Delta and many of these are already addressed in the Draft IRP. Details on the questions and comments are included in [Attachment 1](#).

Energy

In response to requests received at the forums, staff will add a section to the IRP to explicitly address the water-energy nexus. In particular, staff will focus on the relationship between water and energy conservation, and the need to foster partnerships with the energy sector. The new section will also direct stakeholders to other Metropolitan plans such as the Energy Master Plan Road Map.

Local Supplies

Several stakeholders commended Metropolitan for its foresight in preparing the region for the recent Bay Delta supply shortages and drought, acknowledging that local supply programs prevented the region from experiencing deeper shortages. Stakeholders also expressed their appreciation for financial support provided through Metropolitan's Local Resources Program for recycled water and groundwater clean-up projects.

Based on other questions and comments, there is a need for additional explanation in the IRP in the following areas:

- The implementation process of local supplies, such as recycled water projects, in the Core Resources Strategy and the Uncertainty Buffer.
- The region's approach to water recycling.
- Assumptions made for the local resource supply goal.

Partnerships

The majority of the comments supported the idea of partnerships, while some warned against public-private partnerships. Two frequently asked questions were:

- How will Metropolitan be partnering with Integrated Regional Water Management Planning (IRWMP) groups in the area?

Board Report (Report on IRP Stakeholder Forums and Online Survey)

- Can Metropolitan provide more details on what is meant by “enhanced partnerships”?

Both questions will be addressed in the final report with enhanced descriptions. General responses to these two questions are shown below.

Partnering with IRWMP Groups

Statewide initiatives highlight the need for Integrated Regional Water Management and Metropolitan has collaborated with IRWMP groups in its service area since their creation. Today, Metropolitan staff works with various IRWMP groups and Metropolitan’s incentives for regional projects have been used as local matching funds by IRWMP groups when pursuing state grants. Goals set by the IRP, may be fulfilled through work done through the IRWMPs and vice versa. A discussion will be incorporated into the final report.

Enhanced Partnerships

Historically, Metropolitan partnerships have consisted of Metropolitan providing incentives to local agencies to develop local projects. Enhanced partnerships broaden Metropolitan’s ability to investigate different models, including the potential for Metropolitan to be a part-owner or full-owner of regional projects to accommodate the diverse needs of the region. In the implementation of the IRP, Metropolitan will evaluate the type of partnership and cost-effectiveness of each project for Board discussion and consideration. No projects will be advanced without significant discussion and approval by the Board.

Public Outreach

Comments in the public outreach category highlighted the need for the Metropolitan to include additional discussions in the IRP on:

- How the plan will protect economic and social development.
- The process for implementing the IRP strategies after the plan is adopted.

These items will be addressed through other sections of the IRP.

Reliability

Reliability was a topic that many stakeholders brought up with discussions on the IRP’s goals and cost. Many comments emphasized the need for future reliability in order to keep the cost of water reasonable and to safeguard the region’s economy. The following aspects of reliability will be expanded in the final IRP report, based on the feedback received are:

- How economic conditions play into future demand projections?
- How and when will programs for the Uncertainty Buffer and Foundational Actions be implemented?

Economic Conditions and Reliability Planning

Expanded explanations in the final report will show how Metropolitan’s forecasts of regional water demand use income projections from the Southern California Association of Governments and the San Diego Association of Governments. The Uncertainty Buffer will prepare the region for differences in water demands related to economic activity, among other things.

Research and Development

Most of the comments and questions received at the forums in this category were already discussed within the draft report. Comments in this category generally requested Metropolitan to research new technologies in water conservation as well as supply augmentation. Recent research is discussed in the technical issue papers included in the appendix and future research is part of the Foundational Actions.

Board Report (Report on IRP Stakeholder Forums and Online Survey)

Risks

A substantial portion of the questions and comments at the IRP Forums in this category were already identified in the draft report. Additional items that will be expanded upon in the final report are:

- Defining low-regret actions
- Discussions on Metropolitan's emergency preparedness (including preparation for earthquakes)

Low-Regret

At the Forums, staff used examples to clarify what is meant by low-regret and high-regret actions. For seawater desalination a pilot study on the implementation of a desalination plant would be considered a low-regret action. Buying the land and constructing the desalination plant well before supplies are needed would be an example of a high-regret action. In the final report, the concept of low-regret actions will be better defined and examples for various resources will also be provided.

Emergency Preparedness

Metropolitan considers earthquakes a part of its daily operational risk and has adopted an Emergency Plan that delineates how to handle a catastrophic earthquake situation. The final report will include a section that outlines Metropolitan's emergency preparedness.

Time Extension

The only Forum where stakeholders requested additional time to review the IRP before adoption by the Board was the forum in San Diego. Comments were noted and have been included in the detailed comments and questions section of this report. Staff stated at the San Diego forum that the request for more time to review the plan would be relayed to the Metropolitan Board for discussion.

Online Survey

As an additional method of collecting feedback from regional stakeholders on the 2010 Draft IRP, Metropolitan developed an online survey. Stakeholders, including attendees from the first round of Stakeholder Forums, were informed of the availability of the survey via email. Those present at the second round of Stakeholder Forums in August were again informed of the survey and asked to participate. This section provides information on the level of participation, regional representation, and a summary of the responses on each question. The input received through the survey has been reviewed by staff and will be incorporated into the final IRP as appropriate. Specifics on the responses can be found on [Attachment 2](#).

The survey was available on Metropolitan's website from July 14 – August 20, 2010 and contributors could provide their input anonymously if they wished. The questionnaire consisted of a total of ten questions. Eight questions asked survey participants to describe their level of agreement with each statement, from five choices:

1. Strongly Agree
2. Agree
3. Somewhat Agree
4. Disagree
5. Strongly Disagree

Following each question, a box for comments was made available for contributors to add to their responses with written comments. Two questions were open-ended, which allowed stakeholders to provide feedback on subject matter that they felt was the strongest or weakest portion of the Draft IRP.

Participation

A total of 40 stakeholders participated in the survey and answered at least 80 percent of the questions. Given the geographic region Metropolitan represents, more responses to the survey were expected and would have increased the survey’s statistical significance. However, some analysis can still be conducted from the small sample received. The regional participation breakdown is shown in Table 1 below:

Table 1: Regional Stakeholder Participation

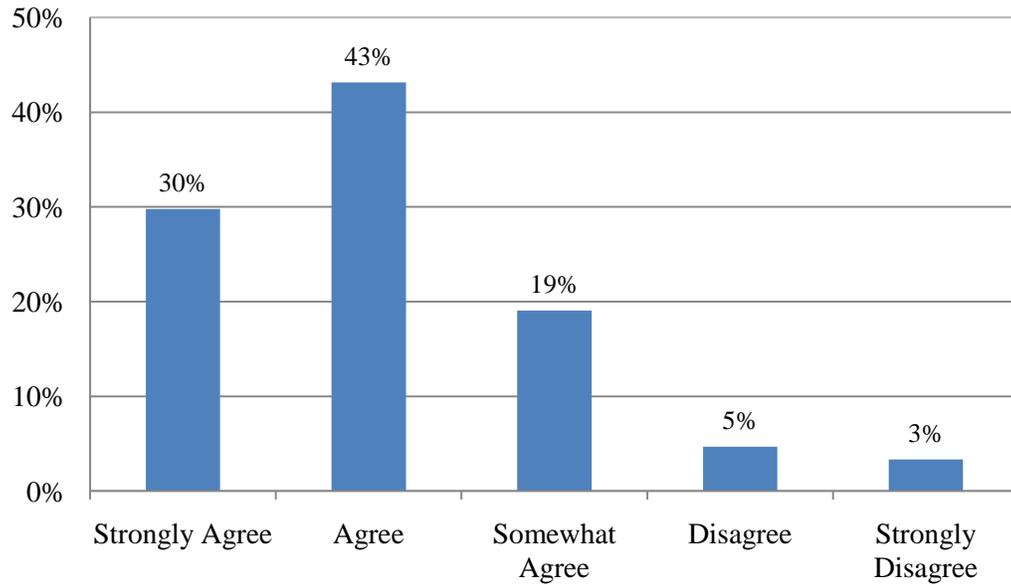
County/Area	Percent Participation
Los Angeles	46%
Orange	23%
Riverside	10%
San Bernardino	3%
San Diego	15%
Ventura	5%
Outside MWD Service Area	0%

Based on the distribution of the responses from question 1 through question 8, participants mostly agreed or strongly agreed with the statements posed in the survey. A breakdown by question is displayed in Table 2 and a graphical representation of the average response to the statements is provided in Figure 1.

Table 2: Distribution of Responses by Question

	Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree
Question 1	37%	37%	18%	5%	3%
Question 2	39%	50%	8%	3%	0%
Question 3	24%	50%	16%	3%	8%
Question 4	27%	46%	24%	3%	0%
Question 5	41%	30%	27%	3%	0%
Question 6	29%	40%	20%	11%	0%
Question 7	18%	42%	26%	8%	5%
Question 8	24%	50%	13%	3%	11%

Figure 1: Average Distribution of Responses



Comment or Support Letters

Since the publishing of the IRP draft report on July 6, 2010, Metropolitan has accepted comment and/or support letters through the IRP Website email box, via staff email or through the mail. **Attachment 3** presents all of the letters received by Metropolitan staff through September 3, 2010. The attached letters have been reviewed by Metropolitan staff and comments have been incorporated into the IRP report as appropriate.

2010 Integrated Resources Plan

2nd Round of Stakeholder Forums Comment and Question Details

Forum in Orange

Conservation

- Clarification is needed on water use efficiency in 2015; what supplies are going to be sold?
- What is the difference between the regional and retail compliance for 20% by 2020?
- Will incentives be increased to achieve 20% by 2020 compliance?
- At the retail level, increasing conservation causes revenue losses
- A conservation focus is good since it also reduces greenhouse emissions and energy consumption
- Conservation should be dictated by rates
- Recommendation for a reverse 911 program to alert residents and businesses to save water

Cost/Rates

- How will conservation impact regional and retail sales?
- The reduction of supplies and reliability can also cause rates to increase
- Rates need to be maintained reasonable
- If the local projects are implemented how will rates be impacted?

Delta

- What is the plan to fix the Delta?
- How critical are the Delta improvements to the success of the IRP strategy and what is the back-up plan?

Energy

- Energy conservation and the connection between water use and energy consumption is not discussed enough in the IRP. Metropolitan should include vendors in future technical workgroups to provide new ideas in energy conservation.

Local Supplies

- Local supplies are becoming increasingly more important for reliability and at the same time becoming more expensive. It would be helpful if Metropolitan not only gave incentives to build local supply projects but also became a partner on Desalination projects.
- Cautioned about the implications of looking at graywater through foundational actions since graywater can damage aquifers
- Metropolitan should be providing more than just imported water to the region

- Recommend that local projects be owned and operated by public agencies in order to reduce the cost of the project

Partnerships

- Metropolitan should partner with retail or member agencies to reduce the cost of Desalination projects
- Public partnerships are perceived better than private partnerships
- We need someone from the state of California to get involved with protecting Southern California's water resources from over-regulation
- What is being done with the California Department of Public Health to move regulations forward?
- What is the difference between existing and enhanced partnerships?

Public Outreach

- Metropolitan should outreach to new sources for new ideas
- How are you promoting recycled water projects to the public, without using the "Toilet to Tap" moniker?
- Could parts of the IRP be translated to other languages to spread the word about water planning in the region

Reliability

- How do economic conditions play into future demand projections?
- What is the difference between a reliability goal to meet supplemental water needs versus "to provide an adequate supply"?
- Is there a process to track economic impacts that supply reliability will cause?
- Are the reliability projections based on the fact that the Tracy pumps have been shut off?
- What happens if the pumps are turned back on in the Delta, does that supply enough water?

Research and Development

- Could Metropolitan develop a technology road map as part of the IRP?
- Increasing rates could provide the region with additional funds for research and development
- Focus research and development on constituents of emerging concerns

Risks

- Are the probabilities used in the assumptions correct?
- Have political uncertainties been taken into consideration?
- Water quality, in particular constituents of emerging concern can be a future risk
- Define low-regret
- Regulation is missing from the future risks
- Why are earthquakes not included as one of the uncertainties?

Time Extension

- None

Other

- When describing the foundational actions we should explain the process to employ the actions
- Summarize the action items of the plan in the executive summary
- Has cloud seeding been included into the plan?
- Is there a way of telling the story, of water quality management, better than it is being told in the IRP?
- Did not hear anything about agricultural uses; what percentage is going to agricultural use versus urban use?

Forum in Ontario

Conservation

- Are conservation projections based on price elasticity or devices?
- If you are serious about achieving the 20% by 2020 goal we need to consider the water and energy nexus and we need to look at small scale energy generation

Cost/Rates

- Have the cost of a Delta focused strategy versus a locally focused strategy been looked at?
- Will replenishment water ever be available at the discount rate again?
- Does the plan protect the region's economic and social development?
- How much will it cost to implement the plan?
- How is Metropolitan maintaining its financial security?
- More discussion on the cost assumptions need to be added to the plan

Delta

- Additional discussion of the risks of the Delta needs to be added to the document

Energy

- The water-energy nexus needs to be highlighted in the plan
- Ron Stewart from Combined Energy provided information on his company which focuses on cleaning groundwater while producing energy. His company was showcased on a program titled "Powering the Future" which was shown on the Discovery Channel. Mr. Stewart urged Metropolitan to implement similar energy generating projects to clean groundwater.

Local Supply

- Many of you should know that if we did not have the local programs that Metropolitan has subsidized, we would have been in deeper and longer shortages the last two years. I would strongly urge the Metropolitan board and staff to resist against the idea of opt-out.
- What has been the participation and feedback of the graywater workgroup?

- The committee that deals with the groundwater basins has not given enough thought to how to use our groundwater basins more efficiently
- Diamond Valley Lake's capacity is almost the same as the unused capacity of Central Basin and San Gabriel basins showing that there is still room to increase groundwater storage programs

Partnerships

- The Laguna Declaration has served us well, and I encourage the strengthening of partnerships. The flood control districts should also be included to look all three sources of water in a conjunctive manner.
- Are there partnerships in place for groundwater brine desalination or ocean desalination?
- There is a discussion about a regional nexus task force; maybe you can partner with the IRWMP groups

Public Outreach

- In order for the plan to be accepted by the community, the plan needs to detail how it will protect economic and social development
- How will you be handling public perception of the various strategies?
- What ideas do you have as far as incorporating stakeholder and public opinions into the implementation plan?
- Do you understand that people are confused and frustrated by the adaptive concept of the IRP and some agencies are falling back on traditional plans?

Reliability

- Metropolitan subsidized local supply programs have increased the regions reliability
- I like the plan because we are thinking bigger. Where would we be if we didn't have Diamond Valley Lake? I like the buffer concept and the idea of the adaptive management so that people can look back in 20 years and thank god that we developed this IRP now.
- Compliments to the staff on being able to secure the buffer
- We are now seeing a shift with changes of our supplies and I like this plan because of the buffer and the foundational actions
- Why was 10 percent chosen as the buffer?
- What are the triggers for the foundational actions?

Research and Development

- There a lot of technologies that need to be researched, particularly in the area of water and energy conservation

Risk

- Having the opt-out approach puts the region at risk because we are only as strong as our weakest part
- There are a lot of uncertainties to plan for, and the buffer helps us plan for them
- The adaptive management plan means that we are acknowledging that there are things in the future that we are not sure of

- More discussion on risk, and what are the cost assumption need to be added to the plan
- Do the differences in the modeling include the variations in the rainfall and snowpack?

Time Extension

- None

Other

- Preferential rights have been known to be unfair, perhaps we can use land assessments to establish the need. This plan could be improved by changing the philosophy of Metropolitan.
- Water use efficiency targets are best achieved in the environment of an efficient and vibrant market. We should have language that allows member agencies to transfer water through an open market.
- How do the strategies of the IRP fit-in with Metropolitan's role?
- Regarding the implementation schedule, what is the level of certainty, particularly looking at 2015?
- I know Metropolitan has published a report on earthquake planning. Can something be added to the IRP about disaster planning?

Forum in San Diego

Conservation

- Conservation is a code word for price point
- There are some strong studies that show that the price elasticity is $-.33$ for every one percent increase in water rates
- What percentage does the 20% by 2020 require the region to conserve?
- We have now become masters in conservation at the local level. As you move forward with the IRP, Metropolitan should change its role as far as the way it develops conservation programs and should be very optimistic about savings. As far as the conservation program, it is very difficult for customers to send in rebate forms to Metropolitan when we can do things locally.
- What have you done as far as evaluating the demand of water as prices goes up?
- Why does the WUE target stay at 380 TAF?

Cost/Rates

- How are you testing the rate impact sensitivity and how is that getting reflected your calculations?
- Energy and water are the drivers of business. What would be the cost impact to customers to pay for the buffer and core resources? We don't see water to be as cost impactful as energy costs.
- Are there going to be some reliability costs for agencies that want the reliability? How does that get put into the formula?
- City of Coronado rate payers, which are 24,100 people, are not looking for rate increases; they are more likely to conserve than have rate increases, especially with the current economy

- Metropolitan seems to be removed from the tax payers, and we will not be paying for things that are being crammed down our throats
- As far as the cost of the buffer, historically Los Angeles has rolled on and off the system depending on their supplies. Before, when we all had lots of water it did not matter but now when it comes to developing the buffer can we have agencies choose whether or not they want the buffer. As far as costing and planning there is a big disconnect from sub-agencies. With water bills increasing people are starting to notice.
- Is Metropolitan going to insist on firm contractual agreements to pay for the development of investments?
- We are asking our customers to be more efficient and pay more? Our rate payers expect us to do a great job on planning and to balance the cost. I don't see the cost benefit analysis in the document.
- When talking about rates you need to think about the cost of other commodities, gas is more expensive than water.
- It is very difficult to identify the blueprint without the cost
- The sensitivity of cost will be increasing in the future as prices increase
- Cost should be explained in terms of life cycle costs.
- Are we using more water in areas where the price is less and are places where we see growth having the higher prices? In the future will we have situations where inland areas do not want to pay for desalination projects? There needs to be a discussion at your policy level on who will pay for what.
- Will other regions pay for our plans to reduce how much Colorado River Aqueduct we take?
- There are concerns of over exceeding needs and the cost associated with that, but if we fail to fulfill the needs the cost also increases
- Is cost information going to be provided before the plan is adopted?

Delta

- What percentage of our supplies comes from the Delta? Is there going to be more political problems dealing with the canal? What is Metropolitan going to do?
- I would caution against the investment in the Delta unless there is an agreement on the increase of supply
- Concerned about the cost of the Delta
- On the possible scenarios that were included in the plan is the Delta work being completed by the state or Metropolitan?

Energy

- When developing the reliability analysis, was the need for energy considered, and have the statistical analysis been made to see if the energy is available?

Local Supply

- Would like to get more information on stormwater
- Surprised to see recycled water projects in the foundation action and not ready for prime time

- Do you see water use efficiency as being a firm commitment and the alternative local supplies being developed on an as-needed basis?
- If we do an indirect potable recycled water project we would want the project to be counted towards 20% by 2020 and not recycled water. We would like to see the databases to see what the assumptions are of when projects will be coming online.
- Calling desalination out in the buffer could inhibit agencies' abilities to develop the resource. We need all the help we can get. Why not identify desalination and recycled water as core resources?
- Back in 1991 during the last drought if it wasn't for miracle March we would have been down 50%. During that time San Diego County Water Authority realized that we were 95% reliant on Metropolitan and so here, in San Diego, we are more sensitive to cost. As far as Sweetwater Authority, we got a subsidy for our groundwater desalination project that is due to expire soon. I really like those programs and in the future they should continue to be provided and we should explore if Metropolitan should fund them alone or through partnerships.
- Many facilities today are dumping water because there is not enough infrastructure (purple pipe) we need help in getting the distribution. As far as Stormwater it has become very efficient to use it to recharge aquifers.

Partnerships

- Does the IRP live on its own, or do our neighbors interact with our plan?
- METROPOLITAN should explore if local supplies can be developed through partnerships

Public Outreach

- It seems to me that some believe that the IRP is saying that projects counted in the resource strategies are going to get done
- Are the assumptions used in the IRP available to the public, if so will they be posted on the website?

Research and Development

- None

Reliability

- What kind of reliability are people really comfortable with and willing to pay for?
- Most agencies know the saying "You don't know the value of water until the well runs dry". Obviously there are other views out there but we cannot balkanize our plan because everything we do is a combination of local and imported water. I have seen studies that show that 50% of everything in CA is water related. We cannot afford to not have the reliability.
- The reliability goal was not discussed instead was set to fulfill retail demand. Our customers want a choice on the level of reliability they are willing to pay for.
- How does Metropolitan ensure its core supplies are not stranded?
- In 2035 the shortage that will be there 50% of the time, we need to see the details to see if that is meaningful or not

- What I am hearing you say is that these projects are going to be developed in case we do not get enough water from the State Water Project or Colorado River Aqueduct. So, under extreme circumstances they will be put on line?
- In the past the concept of a buffer was focused on Metropolitan's supplies, I was surprised to see it at the retail level. Since reliability varies across the region perhaps you can develop the cost among the benefits of each agency.
- The written text seems to draw a contrast between past IRP buffers and the new operational buffer. To me, the supply buffer seems to be a supply margin similar to one used in energy planning. However, based on the presentations some of the buffer may be developed some may not. Will those resources be developed?
- The executive summary says that the buffer will be implemented, not that it might; we have a disconnect there
- Gets nervous when talking about centralized versus decentralized projects for recycled water
- Which areas of the Metropolitan service area have the least water reliability and how do you judge water reliability? How do you prioritize areas? Do you have a GIS Map that I can see? Are you trying to put the projects in areas where the reliability is needed?
- You referred to taking shortage actions, by that do you mean that it is something that Metropolitan would do or signal to the member agencies to let them know that there is water in storage?
- What do mean by storage is that existing or planned storage?
- Is the reliability analysis for potable water or reclaimed?
- Does this conversation of reliability and shortages in 2035 include the IRP actions?

Risks

- Metropolitan's role has been to primarily focus on imported supplies and it is important to keep some focus on those supplies. However, Metropolitan's support is needed locally in the planning of future uncertainties
- Why is population growth not listed as one of the uncertainties in the IRP?
- Is the 2035 reliability shortage related to growth and how is Metropolitan ensuring that agencies pay for growth?
- My concern is that the IRP does not address that we cannot sustain growth
- The shortage that you are talking about is it to the region or service area?

Time Extension

- It seems optimistic to finish the plan by October.
- Agree with SDCWA that we need more time to review the IRP
- If the public comments that they would like more time to review the IRP then the deadline could be changed?
- The Board has not been unanimous about the deadline?

Other

- What do aggressive actions mean? I think it is backwards to do the foundational actions after the buffer
- I would like to suggest Metropolitan focus on US made or NAFTA made products
- If this process was reviewed by an outside agency like the rocky mountain conservancy how would they rate it?
- Your challenge is large, to develop an IRP that we are all going to be happy about
- Are the assumptions based on reality?

Forum in Los Angeles

Conservation

- For 20% by 2020 compliance are you considering carrots vs. sticks? Are you considering incentives for conservation hardware?
- Does Metropolitan have plans of providing incentives for agencies that have gone above and beyond what they are designated to conserve? For example City of Santa Monica's 25% conservation effort.
- In the gap chart, where are the behavior changes from education and ordinances?
- In Central Basin, private sector plays a big role in conservation. Do not throw out private-public partnerships.
- The region will be better off if you include all of the 20% by 2020 (full regional compliance) target in the Core Resource Strategy
- We would like to see an increased emphasis placed on conservation through the regional compliance with the 20% by 2020 goals

Cost/Rates

- With the upcoming negotiations of purchase commitments, does Metropolitan have plans to retain the allocation structure?
- Understanding there is cost associated with all the strategies, we would like to see the cost and rate implication of all the strategies in greater depth as we move forward.
- At what point will you be presenting preliminary budget numbers to support this ambitious but believable plan? Will it be before October Board meeting?

Delta

- Inevitable that levee system in Delta will collapse in a major earthquake, will be 10 times the cost of Katrina.

Energy

- When think of integrated resource management, think about integrating things outside of mission statement; not just supply, but also other benefits. This plan talks to the integrated concept but does not capture it. Energy reduction is another benefit. Ocean desalination has the highest rebate but also highest energy footprint. Integration of benefits should impact

everything. Incentives seem to be inversely related to energy footprint and other environmental considerations.

Local Supply

- Regional Water Quality Control Boards are identifying hot spots, low hanging fruit for groundwater storage; encourage long term water quality focus.
- Why is Stormwater not part of the local resources core component?
- The plan needs more explanation on the regional approach to recycling
- Recycled water: are you talking about groundwater recharge or build out of hardware? There's no reason why drinking water should be used for irrigation or industry
- What assumptions are made for the local resource targets; are there actual projects?
- Beverly Hills has problems with local groundwater contamination, can Metropolitan help us? Who should we contact?
- We would like to see stormwater elevated into the Local Resources Program
- We recognize some of the difficulties laid out in the IRP with regards to large scale stormwater projects but we are still interested in seeing the idea fully developed, looking forward to taking actions to develop stormwater. Dealing with water quality concerns is necessary precedent to the development of stormwater as a resource.
- What is Metropolitan's position regarding the fact that the CA Department of Public Health has not set regulations for recycling, stormwater, and graywater?
- Can Metropolitan make available a centralized database of groundwater quality data to help decision makers, not just the raw data but all information integrated?
- Suggest creating a fast track task force for capture of Los Angeles River since the river is no longer under purview of Corp of Engineers
- How can we prevent saltwater intrusion into the Orange County groundwater basin?

Partnerships

- Can you provide more details on what is meant by "enhanced partnerships"
- It would be great if Metropolitan could form more partnerships with municipalities
- We are supportive of Metropolitan moving away from strictly an imported water focus and would like to see Metropolitan moving toward partnerships or ownership of large regional supply projects
- Heard about briefings Metropolitan has had with people from Israel, there are other countries with worse problems than us, look at their best practices ... how do you get at best practices from the world, from other states?
- The Laguna Declaration is the policy principle for partnerships

Public Outreach

- Mentioned trend to back-off on regional approaches to recycling projects (because of vulnerability to public perception opposition); we are hearing the opposite from legislators in Orange County

- On public outreach and education; compliments to Metropolitan, students are good at telling parents about water conservation, you should continue in that direction.

Research and Development

- IRP should include a recommendation to establish a competition for relevant energy or desalination technologies; if a coalition of water agencies could incentivize a completion prize to help reduce cost of recycled water, energy technologies or improve water use efficiency
- Question: page ES-10, you have considered potential additional supply sources; would like to see you add one more to the list: “marine transport” or “water bag technology”. (potential for hundreds of thousands of acre-feet). Have received letters of support but unable to get to demonstration. Consider as an innovative technology. Inevitable that levee system in Delta will collapse in a major earthquake; will be 10 times the cost of Katrina. Could build a fabric pipeline. Request a full study.

Reliability

- Has there been any looking into longer term projects, as water for the buffer? Once we get to 2020, some governor may call for more water savings. Are projects for savings lined up collectively with other agencies not just in Southern California but outside of Metropolitan area?
- In chart with storage and withdrawals, I noticed that input to storage seemed small; withdrawals seemed quite significant (more outputs than inputs)?
- Noticed in charts, two instances where increased supplies, SWP 100 TAF, Colorado River 400 TAF; are there specific plans for those?
- Suggest that Metropolitan assign value of a more reliable supply of water, degrees of reliability

Time Extension

- None

Other

- Great concerns about us continuing to take water from other areas. Don’t see the cost for canals, reservoirs and dams (which are environmentally unacceptable), whether we are looking water locally or statewide, we are looking at short term (not looking at habitat consequences), reservations about continuing to import water from elsewhere. Because everyone else will be in same boat, lacking water. Be more conscious of what we are doing locally. Won’t be cheaper to wait down the road. Will end up in water wars, with L.A. taking water from other areas.
- Will the IRP components be sequential?
- On behalf of West Basin MWD we applaud Metropolitan staff for completing an articulate and involved process for the IRP. At some point we called the IRP “water resources plan version 3.0” because we have learned from past IRPs and the lessons of uncertainties and reliability have been incorporated appropriately.
- In long term planning, are you considering total water independence for your service area? It’s doable, but is it in your planning horizon?

- Historically there has been a degree of noncooperation with middle and top third of state; but water is a California statewide issue; would it be better if all 58 counties in CA were covered by Metropolitan?
- Does Metropolitan have strategies to counter deterioration of infrastructures outside of its service area?
- The region needs a designated “bad guy” to use the bully pulpit to discourage water wasters. Especially big users such as CalTrans and the City of Los Angeles need to be called-out by television or letters to newspaper editors.

2010 Integrated Resources Plan Online Survey Response Summary

Question 1: The draft IRP report has identified the range of potential options for future water supply development. (Draft IRP Report Section 2)

Answer Options	Response Percent	Response Count
Strongly Agree	37%	14
Agree	37%	14
Somewhat Agree	18%	7
Disagree	5%	2
Strongly Disagree	3%	1

Disagree

- Other options that should be noted in the Seawater Desalination Plan are the alternative sites such as the Rosario Desalination plant.
- See Number 10 below. More emphasis should be put on expanding OC GWRS-type systems and brackish water desalt, over purple pipes and seawater desalination. If the purple pipe system is pursued, the water should be cleaned to a higher level to remove the salts.

Number 10 Comment:

Too much emphasis on recycled purple pipe water and desalination and not enough emphasis on the OC GWRS-type reclamation, which would be cheaper because the purple pipe infrastructure would not be needed. Plus, the water would be cleaner (fewer salts) and cause less salinity buildup in soils. See San Diego water reuse study:

<http://www.sandiego.gov/water/waterreustudy/involvement/fd2006.shtml>

Other Comments

- A more detailed analysis of water supply projects that are under construction or being studied by MWD, member agencies, cities, etc. is needed to maximize efficiencies and to ascertain whether they would meet MWD's supply reliability standards for the future. It does not make sense to "overdevelop" our supplies, which will then unnecessarily increase costs for water customers. How do we make sure that we have a reliable supply without overinvesting? Also, how are local supplies reflected in the IRP?

- Supply alternatives from local sources and projects should be supported at a higher priority due to local control and management.
- Should lay out ranges for each source, given the uncertainty of imports.
- A very diverse set of options were identified, much broader than MWD has traditionally evaluated.
- It does identify a range of options. Yet it does not do so comprehensively as alternative supplies are primarily identified only qualitatively and estimates of expected quantities or costs are not included.
- There are options outlined but I believe that some more discussion of the options that will go into the Buffer Supply may be necessary.
- Why is water bag technology not mentioned as an IRP alternative when it has been endorsed by Board resolutions sent to MET that voted in favor of demonstrating this technology by two Southern California water agencies?
- The draft IRP report has identified several but not all options for future water supply development. For example, emphasis was placed on ocean desalination but a more cost effective desalination approach and supply is groundwater desalination. Very little discussion is included for this resource.
- Needs to consider better use of storm water runoff and collection options and higher water fees for new development

Question 2: The draft IRP report demonstrates the importance of conservation and water use efficiency. (Draft IRP Report Section 3)

Answer Options	Response Percent	Response Count
Strongly Agree	39%	15
Agree	50%	19
Somewhat Agree	8%	3
Disagree	3%	1
Strongly Disagree	0%	0

Disagree

- The draft IRP commits to retail 20X2020 as a core strategy and regional 20X2020 as a buffer. However, it insufficiently identifies the reliability and avoided cost benefits of conservation. It should recognize these benefit both qualitatively and by increasing the value of conservation beyond \$195/AF.

Other Comments

- We believe that conservation will remain an important piece of our water reliability portfolio. San Diego has been doing its share and will continue to do a good job conserving water. The IRP needs to incorporate the percentages of the decreased demand achieved through conservation to calculate necessary capital investments correctly. Also, conservation is only a piece of the water portfolio. San Diego will continue to rely on imported water through MWD and we urge MWD to continue its efforts in State Water Project/Bay-Delta improvements.
- Continued emphasis on water demand management is crucial to showing local efforts to Sacramento and Northern California residents and elected officials.
- MWD continues to demonstrate its dedication to water conservation in this IRP.
- I agree that one component of the developed Buffer Supply should be a regional commitment to conservation by meeting the 20x2020 conservation goals as a regional goal on top of the member agency efforts to comply. The emphasis on conservation should not rely on an expansion of the member agency program, which could lead to elimination of regional incentives altogether. There should continue to be a regional rebate program designed to move the conservation device market.
- The draft report discusses conservation and water use efficiency effectively but sets too low of a goal in aligning itself with the 20% by 2020 state water conservation goal. Greater water use efficiency can and should be sought that the amounts shown through incentives and due to lower costs compared to other water resource development strategies.
- Needs additional conservation options

Question 3: The draft IRP report identifies and recognizes that partnerships can provide regional benefits such as reduced cost, economies of scale, and coordination that may enhance implementation of projects at the local level. (Draft IRP Report Section 3)

Answer Options	Response Percent	Response Count
Strongly Agree	24%	9
Agree	50%	19
Somewhat Agree	16%	6
Disagree	3%	1
Strongly Disagree	8%	3

Disagree

- None

Strongly Disagree

- MWD is often at odds with the agencies it serves. The Water Authority and MWD have had many disputes about rights and costs. The latest example is the dispute over wheeling rate structure. Partnerships are not worthless paragraphs written in a document, it is more than that.
- The description and analysis of the possible approaches (Import focused, Enhanced Regional focus) lack detail and backing. The assumptions of the analysis and how conclusions were reached is completely missing. Moreover none of the details of the RDM analysis, which in theory was used to support the decision as to which approach to use, are included.

Other Comments

- There needs to be more clarity as to how rates will be calculated if facilities are owned and operated by a local agency (see 3-13, Regional Development Options: Incentivizing and Alternative Financing).
- Yes, the importance of partnerships and your local resources program is recognized but there would be greater benefit if more flexibility was given to retail agencies in developing local resources. For example, agencies should be allowed to develop stormwater and graywater programs. MWD can also partner with municipal entities that have water quality jurisdiction.
- Very interested. Please contact Central Basin or City of Bell Gardens in pursuing a partnership or program to reactivate a contaminated well to increase supply to our region. Thanks.
- One or two examples of a working partnership would be helpful.
- I think the draft could be strengthened by demonstrating more quantitatively what the benefits of regional partnerships could be.
- The details were vague: how will basin adjudications and basin management mandates be impacted, are there exemptions (i.e. can the State supersede court decisions-I doubt it), the benefits (and therefore compensation) must be enumerated.
- Regional Partnerships must be a tool in the IRP toolbox. There are existing local resource opportunities that can only be developed economically through a regional effort or partnership including resources such as seawater desalination, brackish groundwater recovery or large scale groundwater recharge with advanced treated recycled water. These resource options must be available for the future, especially if the Delta fix does not materialize.
- MET continues to reject partnerships offered to pursue a demonstration of waterbag technology.
- The draft report should discuss increased opportunities to leverage regional benefits through collaboration with integrated regional water management groups. Under these integrated plans, several of which cover the MWD service area, greater opportunities exist to focus funding to multi-beneficial multi-jurisdictional projects that have been investigated by each respective IRWM plan.

Question 4: A Core Resource Strategy comprised of:

- 1) implementing conservation and water use efficiency measures for retail level compliance with State legislation requiring a 20% reduction by 2020 (20 by 2020);**
- 2) augmenting local supply development;**
- 3) restoring the reliability of the State Water Project deliveries; and**
- 4) developing dry-year programs on the Colorado River Aqueduct can help meet traditional planning and reliability goals. (Draft IRP Report Sections 4-6)**

Answer Options	Response Percent	Response Count
Strongly Agree	27%	10
Agree	30%	11
Somewhat Agree	27%	10
Disagree	3%	1
Strongly Disagree	0%	0

Disagree

- None

Other Comments

- The report needs to be flexible and anticipate future supply challenges.
- You will never get state water resolved. So broader thinking is needed.
- MWD's control over these options varies and this limitation may amount to more than the 10% buffer.
- There is a lot of great information in the appendices. Some of which might be moved to the main report to demonstrate the reliability benefits of the IRP.
- Most of the 20x2020 plan is feel-good legislation, only recommendations for the development of recycled water directly improves reliability. I agree with the other items, especially #3. Successfully removing the Federal Government's influence on the SWP is the key to improving reliability of this source.
- See Number 10 below regarding recycled water. Relying too strongly on the State Water Project is dangerous. Most of the emphasis should be on augmenting local supply and conservation. (Local, meaning not the LA Aqueduct, SWA or Colorado River).

Number 10 Comment:

Too much emphasis on recycled purple pipe water and desalination and not enough emphasis on the OC GWRS-type reclamation, which would be cheaper because the purple pipe infrastructure would not be needed. Plus, the water would be cleaner (fewer salts) and cause less salinity buildup in soils. See San Diego water reuse study:

<http://www.sandiego.gov/water/waterreustudy/involvement/fd2006.shtml>

- Sure it can help, the question is will it be sufficient? The analysis assumes eventually the Delta Conveyance is fixed. This analysis should address the risks of climate change, supply and infrastructure failure, and other scenarios that could dramatically change demands or supplies.
- However it must be made clear that there are risks involved with each of these strategies and therefore alternate Core Supply resources should be made available by following the IRP's adaptive management approach to insure that a pathway to success is available if any of the planned Core Resource Strategy does not materialize.
- I believe that MWD should look more aggressively at water use efficiency incentives with goals that would surpass 20% reduction by 2020. It is the low hanging least expensive means to maximize water resources. With over 60-70% of water use being directed to outdoor landscaping, reductions far surpassing 20% can be realized and should be sought for long term planning.

Question 5: The draft IRP proposes to implement an Uncertainty Buffer of additional conservation, water use efficiency, and local resources. This is an important step to manage the risk posed by future uncertainty. (Draft IRP Report Sections 4-6)

Answer Options	Response Percent	Response Count
Strongly Agree	41%	15
Agree	30%	11
Somewhat Agree	27%	10
Disagree	3%	1
Strongly Disagree	0%	0

Disagree

- None

Other Comments

- We are concerned that the buffer supply addressed in the Draft IRP is much higher than what is needed to meet the reliability goal. This could result in excessive costs that may not be necessary.

- All of the 20 x 2020 conservation goal should be in the core resources strategy. Only additional conservation beyond the 20 percent mandate should be incorporated in the buffer.
- Details of what will entail the 'buffer' and how to pay for it by member agencies are important issues to further address in the IRP before adoption.
- The buffer must also cover increased water demand as a result of densification of land use that is putting increased pressure on local agencies.
- What would this 'uncertainty buffer' look like - physically?
- What is the difference between Water use efficiency and additional conservation?
- Not sure that 10% is enough. Should consider at least one more draconian scenario.
- The buffer, as presented in the IRP is an important tool to handle water supply uncertainties.
- The proposed buffer options need to be planned and developed long before the water supply crisis hits.
- It's fine to plan 25 years into the future, but implementing a 25-year plan is dubious.
- An uncertainty buffer is a reasonable idea; however the proposal of 10% of demands lacks merit. Both demand and supply uncertainty should be addressed. Currently supply uncertainty is limited to predicated hydrologic changes, but many other uncertainties exist. An evaluation of how storage and the buffer interact and an evaluation of the expected cost of shortages should be included.
- Those who do not learn from history are doomed to repeat it. If the 1996 IRP's 500 kaf planning buffer had actually been implemented the region would have a reliable water supply today. We are in allocation in part because of this planning only buffer supply strategy. There are numerous uncertainties associated with the future that a solely hydrological approach will not insure the region against. Metropolitan staff should strongly advocate the Draft IRP's Buffer Supply be implemented.
- I believe the uncertainty buffer is an excellent approach but begs the question whether 10% is adequate. There is no explanation for why 10% was chosen as a buffer. Why not 5% or 20%?

Question 6: Taking proactive low-cost low-regret Foundational Actions that increase the viability of future resource options such as stormwater and graywater is an effective way to prepare for unknown changes in water supply and demand. (Draft IRP Report Sections 5-6)

Answer Options	Response Percent	Response Count
Strongly Agree	29%	10
Agree	40%	14
Somewhat Agree	20%	7
Disagree	11%	4

Strongly Disagree	0%	0
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Disagree

- Graywater without backflow devices on the water system impose increased risk to water quality.
- The viability of stormwater options need to be aggressively explored now, for several reasons - reducing runoff volume, velocity and pollution; decreasing channel scouring; decreasing flood risk, increasing infiltration where soils and water table are appropriate. Rights of way along channels should be acquired as buffer strips. The cumulative effect of stormwater and graywater on soil health, microbial activity and plant health should also be studied.

Other Comments

- It appears that the foundational actions are optional until triggered by an event or regulation that puts further strain on the current projected water supply. We think that a proactive approach is needed to begin developing programs for local stormwater and graywater programs and projects. At a minimum, further study needs to be conducted by MWD to begin to quantify potential supply from these resources.
- Some good ideas but not action.
- I believe that taking low-regret actions to further desalination will probably be more productive than graywater. I also support MWD moving toward partnerships or ownership of large regional supply projects.
- And it's just plain smart.
- It is hard to disagree with this statement. Proactive low-cost, low-regret Foundation Actions will indeed be useful. However, those low-cost, low-regret actions were not described (a list of actions was included in section 5, but which of those are low-cost low-regret was not specified). Moreover monitoring criteria and triggers were not identified. The adaptive management plan should be expanded to include sufficient information to be operationalized.
- Increased capture and use of stormwater for groundwater recharge and direct non-potable uses along with an expansion of graywater systems for non-potable uses are effective ways to both decrease demand and enhance groundwater recharge. Metropolitan as the regional water provider can and should take an active role in advancing these technologies throughout its service territory.
- I support further investigation and actions to promote and support stormwater capture through LID and planned recharge approaches as well as use of graywater. More discussion of the water quality impacts and benefits need to be included.

Question 7: This draft IRP report lays out an effective strategy to address water supply reliability for present and future needs.

Answer Options	Response Percent	Response Count
Strongly Agree	18%	7
Agree	42%	16
Somewhat Agree	26%	10
Disagree	8%	3
Strongly Disagree	5%	2

Disagree

- None

Other Comments

- We realize this is a complex process and thank MWD for developing strategies to ensure we have a reliable water supply in the future. However, because this is such an important issue, we believe more time needs to be spent to address stakeholders questions and concerns.
- Needs further discussion to detail out how it will be administered and costs allocated to member agencies.
- Salinity may undermine foundational assumptions
- See comments in question 4 - There is a lot of great information in the appendices. Some of which might be moved to the main report to demonstrate the reliability benefits of the IRP.
- As long as the Core, Buffer and Adaptive Management strategies remain as they are described in the report I agree. However, if the Buffer is downgraded to a planning buffer and/or we do not develop an adaptive approach to resource development that can be responsive to future uncertainties that can undermine the Core, then I will strongly disagree.
- Overall well done. Use of models to forecast reliability is effective.
- Not enough proactive thinking or "thinking out of the box." Too much standard and old school rhetoric.

Question 8: The IRP Process (Stakeholder Forums, Technical Workgroups, Board Direction and Strategic Policy Review) is a comprehensive approach to identifying a long-term water resources development strategy. (Draft IRP Report Section 2)

Answer Options	Response Percent	Response Count
Strongly Agree	24%	9
Agree	50%	19
Somewhat Agree	13%	5
Disagree	3%	1
Strongly Disagree	11%	4

Strongly Disagree

- Building real partnerships with the agencies is a much more comprehensive approach to address long term water resource strategies. One unintended consequence of MWD's poor partnership with the local agencies is the desire for independence from MWD. This creates alternative water source options MWD is unable to plan for.
- There was little opportunity for effective public input at the outset of the process. And while the process was underway, there was an utter lack of transparency.

Other Comments

- We agree that it is good to involve the public on such an important issue and thank MWD for putting together the various forums, workgroups, etc.
- We commend your public process in developing the IRP. As a technical work group member, I would have liked more interaction with the IRP Steering Committee. After putting in a lot of time, it felt that we should be able to present our work to the committee and have a discussion about our findings.
- Need to have increased workshops and dialogue ahead of consideration of final draft IRP.
- It is very difficult to engage local elected officials and other stakeholders. Risk is a stealth plan.
- Action is what is need, not more reports.
- Especially considering the perspective of local producers and wholesalers.
- I would add to this list a healthy interaction with the Member Agency Managers.
- The outreach should place greater emphasis on collaboration with the integrated regional water management plans and groups within the MWD services area.
- Helps but isn't the solution.

Question 9: What are the strongest aspects of the proposed IRP?

- United States Water and Power, a small nonprofit California Corporation, applauds Metropolitan's draft IRP and the process by which stakeholders have been able to participate and contribute. The emphasis on conservation, efficiency, recycling, desalination, graywater and stormwater solutions is especially promising. Metropolitan also appears to have struck a difficult but balanced position regarding the Delta region and the many competing interests there. We would like to see a report documenting all public comments regarding the IRP. Exactly who receives and reviews comments via this online survey?
- MWD's willingness to address our water situation
- In general this is a more comprehensive plan than past IRP's. There is a stronger focus on conservation and the development of local resources. There is recognition of supply uncertainty and the supply buffer is a sound idea. Overall it appears to be a sound plan.
- The comprehensive consideration of all viable resource options and the inclusive and comprehensive process utilized.
- local partnership
- A good faith public discussion process and document.
- Conservation goal. Reliability goal. Recognition of regional interdependence.
- Conservation
- Water independence for socal!
- Basic information
- Increased emphasis on local resources as supply options for future.
- The strongest aspect is the multi-level approach to reliability, beginning with the core supply components and then moving into the supply buffer and adaptive management strategies. I believe this IRP provides a very robust approach to regional water supply reliability given the uncertainties that exist today.
- Conservation
- High level, broad, far reaching, futuristic and flexible
- Identification of a much broader list of resources options. Taking a risk-based, no regrets approach to uncertainty.
- Excellent systems of systems approach in addressing the challenge...
- Organization into task groups to move the process forward.
- The decision to use RDM and adaptive management strategies are excellent ways to address the many and increasing uncertainties MWD faces in the future. Unfortunately, neither appears to have been implemented comprehensively and no details are included on those analyses.

Question 10: What are the weakest aspects of the proposed IRP?

- Our main criticism of the IRP relates to the critical nexus of Water and Energy. Of course, one could expect no less coming from a nonprofit called U.S. Water and Power (USWP). The multi-faceted relationship between water and energy has in recent years attracted increasing interest in the professional water community and has also been recognized by MWD at a public forum only weeks ago yet it is virtually invisible within the many pages of this otherwise comprehensive IRP. At a future date, USWP will submit a more formal and detailed proposal to Metropolitan along these lines but with respect to the IRP process MWD should consider taking the time to prepare a study of integrated water and power efficiency efforts for the benefit of consumers and in the public interest.
- There are many outstanding questions which need to be addressed before the IRP should be adopted.
- Local resources program is too limited. A portion of the 20 x 2020 conservation goal is relegated to the supply buffer.
- Assumptions the additional SWP will be available due implementation of Delta improvements and a full Colorado Aqueduct will be available as a core resource.
- Need more conservation efforts i.e. outreach/education.
- Timing for review and comment and possible revisions is too tight. A five year document done in public in 4 months. Too rushed!
- Risk of inaction in Delta. Over appropriated and declining Colorado River yield. Not integrating salinity concerns into plan.
- Alternative water supplies
- Needs a tighter edit.
- Not action plan.
- Not clear if there are triggers for shifting greater emphasis on one or more of the options should imports change more than is currently predicted.
- There should be more discussion on the economic impacts of implementing the various IRP components. These impacts will vary widely, depending on the components that are required.
- We Need More Advanced Conservation Programs
- Detailed institutional arrangements and agreements being reached
- Too much emphasis on recycled purple pipe water and desalination and not enough emphasis on the OC GWRS-type reclamation, which would be cheaper because the purple pipe infrastructure would not be needed. Plus, the water would be cleaner (fewer salts) and cause less salinity buildup in soils. See San Diego water reuse study:
<http://www.sandiego.gov/water/waterreustudy/involvement/fd2006.shtml>
- Lack of cost data, lack of analysis of uncertainty and future events (climate change, emergency management, demand profiles), insufficient detail on the assumptions embedded in analyses, insufficient adaptive management plans (that lacks monitoring criteria, triggers, and

identification of specific actions to take if a trigger occurs), no information on the RDM approach.

Comment Letters

	Agency	Dated	Comments/Support
1	Natural Resource Defense Council	7/23/2010	Comments
2	San Diego County Taxpayers Association	8/2/2010	Comments
3	James H. Knott III	8/5/2010	Comments
4	San Diego County Water Authority Forum Remarks	8/10/2010	Comments
5	Western Municipal Water District	8/10/2010	Support
6	Natural Resource Defense Council	8/20/2010	Comments
7	West Basin Municipal Water District	8/23/2010	Support
8	Three Valleys Municipal Water District	8/24/2010	Support
9	City of Corona	8/26/2010	Support
10	Eastern Municipal Water District	8/26/2010	Comments
11	Lincoln Avenue Water Company	8/27/2010	Support
12	Municipal Water District of Orange County	9/3/2010	Support

**Public Comment on the
DRAFT 2010 INTEGRATED RESOURCES PLAN
of the Metropolitan Water District of Southern California
Submitted by the Natural Resources Defense Council**

PRIMARY CONCERNS

- MWD should explicitly incorporate the probable impacts of climate change on future water availability in its planning activities. To do so, MWD should move beyond using a historic 83 year time-series and include in its simulation modeling hydrologic sequences that have been adjusted to reflect expected changes in water availability. Academics and other experts have already developed methodologies that use global climate change models to predict how future climate scenarios (such as a hotter, drier climate with extended drought) would influence stream-flow in California. MWD could use scenarios developed by others or create their own scenarios using similar methods. A document posted on the California Department of Water Resources website¹ entitled “Downscaled Climate Data for IRPsim Modeling” indicates MWD was considering such improvements to its IRPsim model. However, those improvements do not appear to have been incorporated into the analysis of the draft 2010 IRP. If it is unlikely MWD will be able to complete this modeling during the next several months, the IRP should at minimum include a commitment to analyzing and publishing the results of these scenarios during the next year and to incorporating direct modeling of project climate change in the next IRP update. [See below comment #4 under Executive Summary]

- Projected costs, including information on the assumptions embedded in those cost estimates, should be included in the IRP. The few cost estimates included in Section 3 are poorly explained and no cost information is given for the strategies presented in Sections 4 & 5. [See below comment #7 under Executive Summary]

- As stated on page ES-6, the IRP reliability goal aims for “Metropolitan and its member agencies to have the full capability to meet full-service demands at the retail level under all foreseeable hydrologic conditions through [2035].” We question the basis for this goal, and in particular, the definition of ‘full-service demands’ used for planning purposes. Many water services are extremely important and cannot risk shortage, such as fire services and hospital water use. However, other demands, such as lawn watering, are more flexible and currently even inefficient. By setting a goal of meeting full-service demands under all foreseeable hydrologic conditions, MWD has implicitly decided all customers should pay the cost of securing supplies for outdoor lawn watering during peak or drought times. Yet as costs increase, customers may begin to view those services as expendable and no longer an essential part of ‘full-service’. [See below comment #10 under Executive Summary]

- MWD’s operating definition of reliability should be explained in the text and it should be specified that the definition of reliability included in the IRP does not address an imbalance of supply with demands which might result from judicial rulings, catastrophic failure of infrastructure, or other events. [See below comment #35 under Section 4]

¹ http://www.waterplan.water.ca.gov/docs/meeting_materials/swan/100809/IRPsim_review_and_climate_data-2009.03.09.pdf

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- Although price-elasticity is incorporated in MWD's estimates of demands for residential and non-residential water, this variable is exogenously generated, as the section of the modeling that determines demand is independent from the supply determination. MWD should develop an iterative process which includes the costs of each supply portfolio in the demand estimation. Moreover, the water rate increases incorporated into the demand model are likely too low. [See below comment #43 under Appendix A].
 - Robust Decision Making (RDM) is a very effective mechanism for making decisions under high uncertainty and we applaud MWD's efforts to incorporate RDM in its planning processes. However, details on the RMD analysis and results are missing from the IRP draft. These results and how they were incorporated into planning decisions should be included. [See below comment #17 under Section 2]
 - The framework for an adaptive management approach presented in the IRP lacks sufficient specificity to be implemented. Although possible near and long term actions have been identified, including a list of activities that will facilitate supply development, specific monitoring criteria and triggers identifying when those activities should be undertaken have not been specified. Section 5 is more of a guidebook for local resource development than an adaptive management plan. Sufficient specificity regarding monitoring criteria and triggers and how those determine which specific actions should be implemented when needs to be included for the plan to be operational, otherwise the 'adaptive management approach' is simply an exercise in deferred decision making. [See below comments #40 & 41 under Section 5]
 - A section on emergency management, with information on MWD's abilities to absorb and plans to address catastrophic failure of any element of its system (including external failures in the Delta or Colorado River Aqueduct) needs to be added to the IRP. This section should explain the relative vulnerability of the resource mix, the expected magnitudes and duration of outage, and how the region will adapt while that failure is being addressed. [See below comment #26 under Section 4]
 - The incentive provided for conservation should be updated. As water conservation saves potable water located within the MWD service area, avoided costs include not only the value of additional raw water (\$280/AF – the cost of obtaining new additional supplies as listed in the rate analysis presented to the MWD Board by staff), but also avoided pumping (\$119/AF) and avoided variable treatment costs (some portion of \$217/AF). [See below comment #30 under Section 4]
 - The comparison of the three future roles for MWD (Current, Import Focus, and Enhanced Regional) is misleading. It presents Enhanced Regional #1 and #2 as two separate approaches, yet they represent one approach which could lead to two possible outcomes. This distinction is important, as it will not be known a priori which of the two outcomes will occur, and one of the possible outcomes (#1) is less preferable to the Current or Import Focused approach under the metrics cited (frequency and magnitude of shortage and average MWD rate). Moreover, the average expected MWD rate is an inappropriate metric for comparison, as it does not reflect the rates that will be experienced by end-users. [See below comments #21 & 24 under Section 3]
 - Inconsistencies throughout the draft IRP and between the draft IRP and other MWD technical documents should be fixed. These include the expected savings between retail and regional level

compliance with 20X2020; the targets for conservation listed in the 2006 IRP and as existing targets in this updated IRP; the manner in which conservation is attributed to components 1 & 2; and the values for resources reported in various tables throughout. See detailed comments below for an exact description of these inconsistencies. [See below comments #2, 4, 5, 6, 9 under Executive Summary; comments #31, 33, 34 under Section 4; and comment#42 under Section 6]

DETAILED COMMENTS

Executive Summary

1. Perspective of analysis and purpose of planning document

In both the Executive Summary and Section 1, the document needs to describe the perspective through which it was written and the roles and responsibilities of MWD and member agencies. In particular it should explain that the IRP is a planning document aimed at coordinating member agencies and clarifying regional goals. The demands and supply targets included in the document represent MWD's analysis for the entire region. However, this does not imply that MWD will hold sole responsibility (financial or other) for ensuring those targets are achieved. Rather, local supply development, conservation, and other activities will be implemented by a combination of MWD, member agencies and their customers. Achievement of some targets will also result from external factors (such as changes in local, state, or federal codes, standards, and ordinances)

2. Page ES-3 Reliability through Conservation and Local Resources

The draft IRP should be checked for consistency in the numbers it cites. This page states "Metropolitan expects conservation efforts throughout Southern California to save the annual equivalent of 1.2 million acre-feet by 2015 and 1.7 million acre-feet by 2035" yet Section 4, Table 4-5, page 4-17 estimates total conservation to be 1.54 million acre-feet by 2035.

3. Page ES-4 Climate Change

The paragraph on climate change is an excellent summary of the uncertainty challenges facing MWD. This section should include an explanation of how MWD addresses this uncertainty in its planning models. As stated more than once in the draft IRP, longer and more severe droughts have existed in the past and can be expected in the future. As MWD seeks to deliver supply reliability for "all foreseeable hydrologic conditions," it would be irresponsible not to adjust the hydrology used in the planning models because the exceedence probabilities that result from the simulation modeling are the key metrics MWD uses for determining supply reliability and thus for decision making.

4. Page ES-5 20X2020 Consistency in citing numbers

Consistency in rounding/significant figures would make it easier for a reader to follow the entire document. For example, on this page the report states that compliance with 20X2020 will reduce potable demands by at least 375 TAF in 2020. Yet in Section 4, Table 4-5, this is stated as 380 TAF. This occurs in other places in the report as well.

5. Page ES-5 20X2020 conservation through retail vs. regional level compliance

The IRP Draft Executive Summary and Section 4 both cite a savings of 380 TAF will be achieved through retail level compliance with 20X2020, with an additional 200 TAF required for regional compliance. However, in a letter to the MWD Board as part of the Water Stewardship and Planning meeting, dated December 8, 2009 and in a power point presentation given to the IRP Steering Committee on February 9, 2010, MWD, staff reported that these numbers are the reverse: retail compliance would entail 200 TAF of savings and regional compliance would entail an additional 380 TAF beyond retail compliance. MWD staff should check which of these estimates is correct and ensure it is consistent in the levels of conservation it projects for each degree of 20X2020 compliance.

Quotes from the December letter to the board

“By summing up the agency-by-agency savings, staff estimates that regional water use reductions based on member agency compliance would equate to approximately 200,000 acre-feet in 2020”

“Based on preliminary analysis, the IRP water use efficiency targets for 2025 could be increased by an additional 200,000 to 575,000 acre-feet. The lower estimate of 200,000 acre-feet reflects the assessment of member agency retail level compliance with the 20 by 2020 law. The upper estimate of 575,000 acre-feet reflects a regional approach of reducing a ten-year average of historical per capita water usage by 20 percent”

6. Page ES-8 Supply Buffer

See also comments on the supply buffer in Section 4 below. Only the water savings associated with moving from retail to regional level compliance with 20X2020 are included as part of the supply buffer, yet this is not clear on this page of the Executive Summary. This distinction is important, as retail level compliance is included as a core strategy. If all of the savings associated with 20X2020 were to be included in the buffer, with retail level compliance forming part of the core strategy, MWD would be double counting savings. This issue is appropriately addressed on page ES-10.

It is redundant to have the buffer described on pages ES-8 and ES-10.

7. Page ES-9 Core Resources Strategy

The IRP draft states the core strategy is “based on a regional evaluation of supply capability, cost, water quality, and other factors.” Brief mention of costs is made in Section 3 but those costs are insufficiently explained and costs are not included elsewhere in the report. Expected costs for the core resource strategy, alternative supplies, and conservation should be included in the plan.

The IRP should be sure to address uncertainty in costs and how those uncertainties impact decision making (including adaptive management). Given energy costs are expected to rise, estimates of costs associated with fixing the delta are rudimentary, and technologies for alternative supply development are changing rapidly, it is likely many of the supplies that currently are considered too expensive may become cost effective even within the five year period between IRP updates.

8. Page ES-10 Decision Making Flexibility

“Metropolitan has identified actions that should be taken to address risks that could impede supply development.” Sections 4 & 5 both present actions MWD should undertake in the near and long-term; however, neither section explicitly describes or quantifies the risks that could impede supply

development. The risks and barriers to supply development of both the core and alternative supplies should be delineated.

“Metropolitan will also implement a comprehensive approach which will allow stakeholders to select supply projects from any of the four resources to create supply portfolios that could be used to mitigate future supply gaps.” Details on this process should be included in the IRP.

- What is this comprehensive approach?
- Who are considered stakeholders? Only member agencies? Their customers? Other persons?
- How will stakeholders be enabled to select supply projects?
- How will responsibility for and jurisdiction over decision making, implementation, and financing of such portfolios allocated among stakeholders and MWD?

9. Table ES-1 Adaptive Management Resources Targets

As per the comment on 20X2020 above, the acre-feet from conservation associated with retail compliance and the supply buffer should be checked.

Additionally, the acre-feet associated with Local Resource Augmentation should match with those listed in Section 4, Table 4-1, but does not.

As there will be year-to-year variation in these numbers, this table should also specify that these are dry-year supplies. In Section 1 the report explains represent dry year estimates; however, this is not explained in the executive summary.

10. Page ES-11 Ensuring reliability for the future

“Central to every Metropolitan Resources Plan since 1996 is a reliability goal that “full-service demands at the retail level would be satisfied for all foreseeable hydrologic conditions. That commitment remains unchanged in the 2010 IRP Update, and Metropolitan will accomplish this through its core resources strategies”

- See comment on climate change above. Unless MWD adjusts the hydrologic data used to in its simulation models to account for the possibility of longer and more severe droughts or other predicted impacts climate changes, it cannot reasonably claim that it has analyzed all foreseeable hydrologic conditions.
- Currently the MWD planning model accounts for uncertainties in supplies (albeit it insufficiently with respect to changes in climate); however the only mechanism for accounting for uncertainty in demands is the 10% supply buffer. MWD should work to characterize the uncertainty in its demand forecasting, to see if 10% is a reasonable approximation of the expected error bars.

Section 1: History, Background, and Status

11. Page 1-11 Generalized Gap Analysis

It is not clear from reading the draft IRP how the MWD simulation modeling works. On page 1-10 it says “Based on 83 years of historical hydrology from 1922 to 2004, estimates of water surplus and shortage were determined over a 25-year planning period”

- How does this work in the simulation? Are all possible 25-year sequences run (i.e., 1922 – 1957, 1923 – 1958, 1924 – 1959.... and then combined to determine probabilities and

expected values? When these sequences are run, what initial conditions (for storage etc) are assumed?

It would be useful to see not only how large the gap might be in the 10% largest deficits between supply and demand, but across how many years a gap of a specified size might be expected to exist. This is a key piece of information in determining the acceptable risk and the necessary size of the supply buffer.

Conversely, how often is there a predicted surplus of supplies and how often and to what extent does that surplus exceed storage capacity in the region? Over-planning for supply will be expensive and may be beyond member agencies willingness to pay.

12. Table 1-3 Existing Dry Year Supplies with Storage Portfolio & Figure 1-5 Dry Year Supply and Demand Analysis with Conservation

This table differs from the existing dry year supplies listed in Section 4 Table 4-7 in that it includes seawater desalination. The values listed for storage and transfer capability are also greater than those listed in Table 4-7, perhaps because the addition of seawater desalination allows for more water to be stored from year to year.

- Why is seawater desalination considered an existing supply in Table 1-3 but not in Table 4-7? This difference should be explained in the text.

The assignment of groundwater into each of the many resource categories needs to be better explained.

- In Table 1-2, why is Groundwater separate from Groundwater Recovery? If the first refers to Groundwater Conjunctive Use the caption in the title should reflect this.
- In Table 1-2, what distinguishes the 'in-region groundwater' and 'SWP groundwater' categories listed in the second half of this table from the 'groundwater' and 'groundwater recovery' categories above.
- The notes on Figure 1-5 include Recycling and Groundwater Recovery in the LRP and as a separate category from Groundwater Conjunctive Use.

Table 1-2 extends to 2035, with supplies increasing over time. However, the table is said to represent 'existing' supplies. Does this table also include supplies that planned or currently under development? If so, that should be clarified. As this is the beginning of the report, it should be explained this is the do-nothing-additional scenario and MWD will augment these supplies through the three component strategy outlined in the remainder of this report.

13. Page 1-16 Demand

The previous subsections on 'supplies' and 'water quality' include bullet points that describe the challenges faced; yet the two bullet point in the demand section state that adaptive management is required. To retain a parallel structure, these bullet points should simply state "divergence between actual and predicted population and economic growth could lead to inaccurate demand forecasts."

14. Page 1-16 State's Delta Policy

This section states that official California policy calls for a reduction of reliance on the Delta in meeting California's future water supply needs. The claim that MWD is reducing its reliance on Delta water is a mathematical manipulation that disregards the intent of state policy. This

manipulation confuses relative (or proportionate) reliance on the Delta (expressed as a percentage of SoCal consumption) and absolute reliance on the Delta (expressed as a volume of exports in acre-feet). The health of a natural system like the Delta will be determined by absolute volumes of exports, regardless of the proportion of total service area demand that those exports represent. Reducing the proportionate reliance has value only to the extent that if Delta imports represent a smaller fraction of total SoCal use, that might suggest that periodic reduction or restriction (meaning at least some lessening of absolute withdrawals) might be more manageable for MWD and its customers.

Section 2: Developing a Collaborative Regional Process

15. Seawater Desalination

Challenges to seawater desalination were divided into three categories: cost, permitting/regulatory, and planning. Environmental protection, though ostensibly lumped into the permitting/regulatory category merits its own category, as the environmental challenge of seawater desalination is not only a question of addressing legal and regulatory requirements, but of developing sound mechanisms for addressing entrapment, brine disposal, and intensive energy requirements (thus carbon emissions).

It would be good to develop a parallel structure with the other resources discussed in this chapter (recycling, conservation, stormwater, graywater) and to explicitly identify challenges with those as is done in this section.

16. Conservation

The technical workgroup's recommendations are presented as a long unorganized list. These should be categorized for ease of reading and to better describe the types of actions that are recommended.

Beyond the recommendations of the workgroup, several other activities would incentivize conservation and should be included in this section. These include MWD should:

- Work to implement volumetric pricing of wastewater among member agencies
- Set the price of water at the true cost by changing the rate structure to more accurately represent the distinction between tier 1 (existing supplies) and tier 2 (additional supply development). Currently the width of the tier 1 block rate is based on historic demands rather than available supplies.
- Update the incentive for conservation by member agencies (currently set at \$195/acre-foot) to represent the true avoided costs including avoided pumping and treatment costs.

17. RDM Process

This section states the IRP used RDM and shows some hypothetical figures that would have resulted from such an analysis, but the details of the RDM analysis and results are not included. The following information should be added:

- a list of the parameters varied and the range over which they were varied
- the metrics used to represent the expected outcome of each combination of parameters and how those metrics were calculated (ex. present value of shortage cost vs present value of supply cost)
- the sets of alternatives that appear to be robust over a wide range of parameters (i.e., the analysis results)

This information should be summarized in tables and graphs.

This section also says that “Based upon the results of the [RDM] analysis, near-term actions will be identified, monitoring criteria and triggers will be developed and actions that can be taken in the future based upon a trigger will be identified.”

- What actions, monitoring criteria, and triggers were identified? How are those included in components 1, 2, & 3?

18. Identifying Uncertainty

This section is out of place and unconnected. It would be better placed before the RDM header, especially if it is more explicitly tied to the parameters (and their ranges) that were included in the RDM process.

Section 3: Integrating a Policy Approach for MWD’s Role

19. Page 3-2 The phrasing in this section is misleading

“The 2010 IRP Update will continue to serve the future by adapting to the challenges and uncertainties of the future.”

- The update itself is not going to adapt to the challenges and uncertainties of the future (at least not until the next 2015 update is written). The update will provide a framework which (theoretically, if followed) will enable the region to better adapt to the challenges and uncertainties of the future.

“There is a clear path forward...”

- MWD has identified the path it sees as the preference but not everyone would agree it is clear.

“There are opportunities within the Metropolitan service area to develop large-scale regional water recycling and seawater desalination facilities that could significantly enhance Southern California’s supply reliability and water independence, but are also costly and subject to equally complex institutional constraints”

- This should say ‘which’ as use of the term ‘but’ suggests the Delta fix and large-scale regional recycling and desalination are mutually exclusive, yet they are not, and in fact at some point both may be necessary.

“The 2010 IRP Update does not foreclose on Metropolitan’s ability to implement large-scale, innovative supply options like indirect potable reuse and ocean desalination within its service area. The 2010 IRP Update dictates that Metropolitan and the region as a whole take prudent steps to ensure the speedy implementation of new options if needed and reassert Metropolitan’s unwavering commitment to provide Delta Improvements as rapidly and cost-effectively possible”

- This section should also explain the IRP Update does not foreclose upon the possibility that member agencies will take on a greater role in the production and ownership of local supplies.
- Is MWD’s commitment really unwavering? Is there no set of circumstances that would cause MWD to decide to relinquish its commitment to the Delta Improvements? Theoretically, one outcome of the RDM analysis would have determination of under what scenarios (sets of parameters) the Delta Fix would not be a worthwhile investment. The term ‘unwavering’ needs to be qualified.

“The 2010 IRP Update proposes an action plan that is driven by affordability and adaptability. It institutes a directive of paying no more than is necessary to provide reliable water supply and paying no less than is necessary to ensure that water supply and facilities are in place at the time they are needed”

- With little to no information on projected costs (and no information on the assumptions embedded in those estimates) included in the IRP update, how is a reader to know that the action plan is driven by affordability?
- How is “no more” or “no less” than necessary defined?

20. Page 3-5 Enhanced Regional Focus

“Existing Local Resources Program contracts and incentives would be honored. Metropolitan would take the early steps and incur the cost to identify and develop large regional-scale projects like water recycling and seawater desalination but minimize its commitment as a long-term Delta Solution becomes viable.”

- From this paragraph it is not clear if, under the Enhanced Regional Approach, new LRP contracts will be awarded or if the LRP program will be phased out.
- Will MWD be involved the development of any storm or gray water supplies?
- If a regional-scale project is developed before the Delta Solution becomes viable, once the Delta Solution is implemented will MWD step away from that project?

21. Technical findings

The approaches under consideration (Current, Import Focused, and Enhanced Regional) need to be better explained as the descriptions are ambiguous.

- Current:
 - What constitutes “moderate” additional local resource development? What would the range of low to high include? What is the basis for this range/how was it determined?
 - It is not clear how this approach differs from the Enhanced Regional approach. Does it exclude regional-scale local projects? Are the Delta improvements different? Does MWD take a more active role in one than the other?
- Import Focus:
 - Local supplies will continue to be developed by member agencies and their customers. How much of these additional supplies are assumed to be developed? Do the resulting resource quantities differ dramatically from the Current Approach, or is the difference more in financial arrangements?
- Enhanced Regional:
 - The distinction between Enhanced Regional #1 and #2 is whether or not the Delta Improvements are completed within the time-frame of the analysis. For #2, under what time frame are the Delta Improvements considered to be completed and what counts as successful?

The connections between these approaches and the resource strategies presented in Section 4 should be better explained. Is Enhanced Regional #2 the strategy adopted in Section 4?

Given the paucity of explanation included in the draft, a reader cannot determine if the analysis methods used to determine the expected outcome of each of these approaches (Current, Import Focused, and Enhanced Regional) included a reasonable approximation of supplies, demands, and

costs. This lack of detail undermines a reader's confidence in the technical capacity of MWD staff in preparing the IRP and makes the reader question if these details have been omitted so as to hide biases or faulty assumptions. For example, the text explains that shortages (including their frequency and magnitude) and the cost-effectiveness of each scenario are dependent upon key variables such as timing, projected costs, and quantities of resource developed, yet no information is provided on the values for those variables. The IRP should at minimum include:

- A description of the input variables to the modeling and the values that were assigned to those variables for each of the scenarios. For example, what local supplies were considered? What quantity of water were those assumed to supply and what is the cost of those supplies? Under what schedule or timeframe were local supplies developed? What differences are there between the local supplies assumed to be developed under each scenario?
- A conceptual description of the how the model works, including information on the key equations used.
- A commentary on the implications of the assumptions embedded in the model – how they may influence results and what may be overlooked.

22. Table 3-2 Summary of Reliability Impacts

There appears to be no dominant strategy – as each approach (Current, Import Focus, and Enhanced Regional #1 & #2) falls behind the others for at least one metric for at least one year.

- This raises the issue of how to decide which approach MWD should adopt? Should it prioritize lower shortages in early/late years, the lowest frequency of shortage, or the lowest magnitude of shortage?

The expected duration of shortage should be added to this table. As the system allows for storage, frequency and magnitude of shortage do not sufficiently represent how shortages will be experienced within the system. The case of a shortage that lasts one year with a year or more of respite before shortage occurs again is very different than that of prolonged multi-year shortage.

23. Page 3-12 Summary and Conclusions

“The most robust approach is characterized by Enhanced Regional Approach #2.”

- It cannot be said that the most robust strategy is ‘Enhanced Regional Approach #2’ because which outcome (#1 or #2) will occur cannot be determined a priori. The ‘Enhanced Regional Approach’ could be the most robust if the outcomes under both #1 and #2 were preferable to the outcomes of other approaches.
- Yet, the Enhanced Regional Approach is better than the others only for some metrics.
 - Table 3-3 indicates the Import Focused approach will result both in the lowest frequency of shortage and the lowest average MWD rate.
 - Table 2-2 indicates that the frequency and magnitude of shortage is lower for different approaches for different years. Enhanced Regional #1 is always a worse option than Enhanced Regional #2, and at times not as good as an Import Focus or the Current Approach.
- As mentioned in the comment on Table 3-2, the expected duration of shortage should be included when determining which approach is most robust.
- Information on the probability of Enhanced Regional #1 vs. #2 occurring would at least allow for determination of the expected (probability weighted) outcome.

24. Table 3-3 Frequency of Shortage and Average MWD Rate

The description on page 3-10 of how the rates were estimated should reference Table 3-3 so the reader understands the values in the table were calculated in this manner.

Use of the average expected MWD rate as the metric for comparing the Import Focus and the Enhanced Regional approaches is also misleading. The IRP aims at developing targets and plans for the entire region, including those activities that will be implemented by member agencies. Use of average MWD rate as the comparison metric does not show how member agency rates, and thus the end consumer, will be impacted by each approach. The average expected MWD rate is lower under the Import Focus approach because most of the new supplies that will be brought on-line will be developed independently by member agencies. Thus the additional cost of developing those supplies will be incorporated into member agency rates rather than MWD rates. A more appropriate analysis would look at the impact of each scenario not just on MWD rates, but also on the tariffs charged at the end-customer level

Table 3-3 lists the “average cost” as determined by total revenues required divided by total water sold. Yet in Step 4 the costs are allocated to the elements of the rate design and in the text, reference is made to differences in the values assigned. A table summarizing the calculated values for each element in the rate design for each approach would be useful.

25. Summary and Conclusions Section

This section is contradictory. First on pp 3-12 the draft states “The most robust approach is characterized by Enhanced Regional Approach #2.” Then on pp 3-13 it states “The findings of the 2010 IRP Update confirm that Metropolitan will continue to function in its role as defined in the Current Approach.”

- Which approach will MWD be adopting – the Current or the Enhanced Regional?

Section 4: Core Resources Strategy

26. Adaptive Strategies: Emergency Management

Conspicuously absent from the IRP is a section that describes MWD’s ability to address a catastrophic failure which affects its core resource supplies (for example, an earthquake that impedes imports from the Delta, an unexpected contamination event, etc). This section should include information on how much water would be available from storage or local supplies and expected depths and durations of outage.

27. Units for Graphs and Tables

Currently the majority of the Tables and figures do not specify the unit of measurement for the numbers cited in the Tables. Though these are likely in acre-feet, this should be specified on each.

28. Dry-Year Definitions

Section 1 defines explains ‘dry-year’ refers to “the modeled estimates that occur in the 10 percent largest deficits between supply and demand.”

- It would help to reiterate this definition in the text or as a footnote.
- Do the numbers cited throughout the refer to results at exactly the 10% level, the average of the 10% largest deficits, or some other value?

29. Table 4-3 SWP Dry-Year Supplies

Although the sub-section on the SWP includes an explanation for the 151,000 AF gained from the Delta Improvements for the years 2015 & 2020, there is no explanation of why the supply gained from Delta Improvements increases to 283,000 AF for 2025 and beyond. The text should include:

- The year the tunnel/conveyance expected to be completed (2020 or 2025).
- The additional supply gain (AF) from this conveyance.

30. Page 4-14 Conservation Funding

This section states that the current cost of MWD water is \$195 per-acre foot, which is also the maximum incentive provided for member agency conservation activities. Yet conservation reduces demand for potable supplies, located in the region, so conservation not only offsets supply costs but also power and treatment costs. Given the system power rate is \$119/AF and the treatment surcharge is \$217/AF, a minimum avoided cost would be \$336/AF plus \$280 – the cost of obtaining new additional supplies as listed in the rate analysis presented to the MWD Board by staff. The \$195/AF value should be updated accordingly.

31. Page 4-11 20X2020

The text states that retail consistency with the legislative goal “would result in reduced potable demand of 380,000 AF in 2020.” Yet at MWD meetings, staff indicated this is a reduction of 380,000 AF beyond the targets laid out in the 2006 IRP. Thus the total reduction required to achieve 20X2020 compliance at a retail level is greater than 380,000 AF. This distinction is not clear in the text as written and should be better delineated so as to avoid a reader mistakenly underestimating the amount of conservation needed to comply with the legislative mandate.

32. Table 4-5 Estimated Conservation Savings 2010

The 2006 IRP update (Table 3-2) disaggregates conservation savings into a number of categories (Active & Passive; Price Effect; Pre-1990; System Losses/Other; etc). This disaggregation is useful, as it provides additional information on the assumptions embedded in the targets and how those could be achieved. This information, which already exists as part of the conservation stock model (as explained in Appendix A) should be included in Table 4-5.

The 2006 IRP sets higher targets for the conservation program than those listed as part of the existing program in Table 4-5. An explanation of why the 2010 IRP includes lower targets for existing programs for these years should be included in the text.

	2020	2025
2006 IRP	1,028,000	1,107,000
2010 IRP	965,000	1,032,000

Note 1 accompanying Table 4-5 indicates that 20X20 (this is a typo in the text – should read 20X2020) demand reductions are to be achieved both through conservation and recycled water. Table 4-6 indicates the targets for recycled water. The tables and the text should clarify what, if any portion of the recycled water in Table 4-6 counts towards the 20X2020 target so as to assure the reader there is no-double counting of recycled water.

33. Table 4-6 Local Resources Production

The target for recycled water production listed in this table increases between 2015 and 2020.

- Is this entire increment counted towards 20X2020 compliance, and if so, then it appears to be double counted in Tables 4-7 & 4-8.

According to the Table 4-6, local resources augmentation increases from 16,000 AF to 46,000 AF between 2020 and 2025 and then holds steady.

- The numbers cited in Table 4-6 not match with Table 4-1 and Table 4-8
- What is the source of this increase in local resources and how was the magnitude of this added production determined?
- As many member agencies are currently seeking to increase their local supplies, 16,000 AF and 46,000 AF seem quite low.
 - Why is no further increase in local supplies projected after 2025?
 - If the numbers are low because a large portion of new local supplies will be considered part of the supply buffer, than this should be explained.

34. Page 4-20 Implementing a Supply Buffer

Retail demands vary with the climate of a given year. Is the buffer specified for dry-year retail demands?

This section states “MWD will collaborate with the member agencies to implement this buffer through complying with the 20X2020 legislation and by implementing aggressive adaptive actions...”

- The water balances listed in the tables all show retail level compliance with 20X2020 is part of the MWD’s core resource strategy. As such, the degree of conservation achieved by retail level compliance cannot be considered part of the supply buffer or double counting will occur. However, the additional conservation achieved to ensure regional compliance (200,000 AF per the text but this should be checked as per comments above) can form part of the supply buffer. The last paragraph on this page hints at this, but it is very unclear and confusing. The text in this section should be edited to reflect this distinction.
- The text should state that “aggressive adaptive actions” may include, among other activities, conservation beyond regional compliance with 20X2020.

This section should explain why 10% of total retail demand was selected as the size of the supply buffer including information on why that particular percentage was selected and why the buffer is based only on uncertainty in demands. Supply is also subject to uncertainty. Although the simulation modeling accounts for expected variations in supply, it does not account for unforeseen changes/uncertainty in supply availability, such as large variations in climate, infrastructure failure, or other events. Those uncertainties might be appropriately incorporated into the supply buffer.

35. Page 4-21 Achieving Supply Reliability

IRPSIM simulates supplies and demands based on 83 years of historical hydrology. However, many studies have demonstrated that historical climate patterns may not be accurate representations of future. The simulation models should also incorporate a variety of climate scenarios adjusted for the possible expected impacts. Several entities (including UC Davis and UC Berkeley among others) have developed alternative climate scenarios based on GCM models and presented those to government agencies such as the California Energy Commission. Their methods could be used to update the hydrology inputs to the MWD model.

MWD's operating definition of reliability should be specified here and throughout the report, perhaps in Section 1. In an engineering context, reliability usually has three defining characteristics: the frequency, the duration, and the magnitude of the shortage. However in this report, reliability only refers to whether or not simulated supplies (including storage and estimated based on 83 years of historic hydrology from 1922 – 2004) matched or exceeded simulated demands in 100% of the scenarios during the 25 year planning period modeled. Thus the definition of reliability included in the IRP does not address an imbalance of supply with demands which might result from judicial rulings, catastrophic failure of infrastructure, or extreme hydrologic variation.

36. Table 4-7 Demand and Supply Balances under the Current Level of Resource Development
The table includes a superscript for note #2 but only has one note.

Note #1 should be explained in more depth in the text, as it is unclear to what this refers.

37. Figure 4-4 Average Storage Capacity

It is unclear from this graph if “percentage of storage capacity” refers to the amount of water in storage or the amount of storage space that is unused. For example suppose the storage capacity is 100 AF. 10% of total capacity might mean that 10 AF are available (only 10% of capacity is filled) or it might mean there is only space for 10 AF more in storage (90% of capacity is filled, 90 AF are available for use). Given Figure 4-5, this figure likely represents the percentage of storage that is full/the amount of water available, but this should be clarified in the text.

38. Table 4-8 Demand and Supply Balances with Core Resources Strategy

The numbers listed in this table are inconsistent with numbers cited elsewhere in the section.

- Dry Year Storage Need With Existing Supplies should match Table 4-7
- Colorado River Aqueduct Dry Year Supply should match both Tables 4-1 and 4-4
- Local Resources Augmentation should match both Tables 4-1 and 4-6

Note #1 should be explained in more depth in the text, as it is unclear to what this refers.

39. Table 4-9 Demand and Supply Balances with Core Resources Strategy and Supply Buffer
Dry Year Storage Need with Core Resources Strategy numbers should match Table 4-8.

This table and Figure 4-6 suggest that, due to the 10% buffer, there is a surplus of supply between 2020 and 2030 that cannot be captured for storage. Planning for this extra water availability will come at a cost. It might be worthwhile to allow the size of the buffer to vary over time.

Section 5: Making an Adaptive Management Approach Work

40. Identification of triggers

The IRP does not specify the triggers referred to in this section and previously in the report. Concrete identification (qualitative or quantitative) of the circumstances that will signal MWD and the region to initiate implementation of the adaptive management strategies should be included. If those triggers have not yet been identified, the IRP should at minimum set out a committee tasked with or other procedure for identifying those triggers.

- An example of a concretely defined trigger might be “if the ten-year average stream flow in the CRA drops by X%” or “a judicial ruling restricting SWP allocations to Y acre-feet”

Not only should the triggers be clearly identified, but which activities should be enacted if a trigger occurs should be stated. A multitude of activities that could facilitate supply development are included for each resource under consideration in this section, yet not all would need to be undertaken. Under what circumstances should a specific activity be implemented?

41. Figure 5-5 and Figure 6-2 (both are the same) Comprehensive Adaptive Approach

The text in the flow chart indicates a trigger event occurs when there is failure of a core supply. It may be more costly (in terms of time, resources, or vulnerabilities) to wait until failure occurs to trigger an adaptive action. Perhaps an indicator other than failure would be a better basis for triggering an adaptive action. Erasing the clause in parenthesis will address this concern.

Section 6: Findings and Conclusions

42. Specification of conservation in components 1 and 2

As mentioned above, conservation plays a key role in both component 1, the Core Resources Strategy, and component 2, the Supply Buffer Implementation. The elements and targets for conservation that constitute part of each component should be more clearly defined. It should indicate that existing conservation programs and retail level compliance with 20X2020 are part of the core resource strategy and thus constitute the conservation included in component 1. The additional conservation, beyond that achieved in component 1, which would be required to obtain regional compliance, constitutes part of the supply buffer that forms component 2. As written, the text could easily be interpreted by the reader as all conservation associated with 20X2020 compliance falls under component 2, the supply buffer.

Appendix A-1: Demand Forecast

43. Econometric Models:

Information on how the equations used for the final models were selected would help to alleviate concerns regarding model specification:

- Are income and housing density truly independent variables or should the relationship between them be accounted for in the model?
- Is the relationship between the variables best captured by a log-log form?
- With respect to non-residential demands, if there are only for 8 possible employment categories then the use of all 8 categories as variables in the econometric model will lead to perfect multi-collinearity. The model should have omitted one of these variables. As it is currently specified, these variables adjust from an unspecified 9th category of “other” that is incorporated into the intercept.

Given the model parameters were estimated based on data from the 1980’s, a discussion of factors that may or may not have lead price-elasticity, income-elasticity, or water use patterns based on household size and housing density to have changed since the 1980’s should be included. Similarly possible changes in water use by employee should be addressed.

44. Page A.1-17 Assumptions on Retail Water rates

Many agencies are increasing their water rates and the average marginal rate increase (4.4%) from 1991 – 2003 is not representative. For example, newspapers reported a 15% increase in the rates charged by Beverly Hills in 2010. MWD should develop a better estimate of the expected rate increases and incorporate that into its demand forecasts or it risks over-estimating demands.

The assumption that price-induced reductions in demands are gradually reduced to one-third of their originally estimated levels should also be reconsidered. Is there any quantitative data on the impact of demand hardening on price-elasticity?

The range of prices for which the price-elasticity used in the model can be expected to apply is limited to the range of prices in the data used in the parameter estimation. This would be the range of prices in the historic data used to develop the models. As the price of water has historically varied little over time, this range is likely quite small. However, currently rates are increasing quite rapidly (MWD is increasing 7.5% over each of the next 2 years, as mentioned above Beverly Hills is increasing 15% this year alone, the rates of other agencies are similarly increasing). Thus it is quite possible the price-elasticities used in this model will not accurately predict future demands.

45. Page A.1 Non-Residential Estimation Results

Estimation of non-residential water use based on productivity adjusted employment may not be the best prediction of non-residential water use.

“Non-residential water use is often assumed not to be as seasonal as residential water use”

- Water use in parks, golf-courses, for industrial-office parks, cooling towers, etc will all have seasonal relationships.
- The finding of a seasonal relationship suggests other variables may be important determinants of non-residential water use including property footprints.

We include no comments on the remainder of the appendices:

[Appendix A.2: Storage Programs](#)

[Appendix A.3: Resource Issue Papers](#)

[Appendix A.4: Gray water Regulations](#)

[Appendix A.5: Local Resource Programs](#)

[Appendix A.6: Conservation Best Management Practices](#)

[Appendix A.7: Supply Reliability Graphs](#)



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August 2, 2010

Chairman Timothy F. Brick
Board of Directors
Metropolitan Water District of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

Dear Chairman Brick,

Over the past several years, the San Diego County Taxpayers Association (SDCTA) has become heavily involved in reviewing water policies that have an impact on taxpayers and businesses within the San Diego County region. We understand the importance of minimizing the region's reliance on imported water and making investments to ensure a safe and reliable supply of drinking water. In the San Diego region, we have supported conservation efforts which have resulted in a cumulative savings of more than 600,000 acre-feet of water since the early 1990s; invested in the proposed Carlsbad desalination project and the City of San Diego's Indirect Potable Reuse (IPR) Demonstration Project. These and other local investments will ensure that the San Diego region does its part to reduce our dependence on imported water.

Given the region's historic investment in imported water supply, our members are also interested in the water policies of the Metropolitan Water District of Southern California (MWD). SDCTA has reviewed the Draft 2010 Integrated Regional Water Resources Plan (IRP) Update to understand MWD's policies and planning to help meet Southern California's future water needs. Because this important document will ultimately be adopted by the MWD Board of Directors, a policy-setting group, and serve as the basis of MWD's future planning and investments, we understand the necessity to outline as much information as possible so the Board can make a well-informed decision.

Upon review of the Draft IRP, SDCTA has a number of concerns regarding the information, and at times lack thereof, which is presented within the report. We have listed below several questions and concerns we believe must be addressed prior to the MWD Board accepting this report as a guiding policy for meeting the region's water needs:

- 1) **True Costs of Developing Water Supply** – Section 3 of the IRP entails a description of several alternative “roles” for MWD in future supply development. The report further describes the Cost of Service process but does not clearly outline in detail the water supply projects being reviewed under these alternative roles, when and where these projects will begin, the amount of water expected to be produced, or the costs to construct, operate, and maintain the infrastructure. The outcome of this analysis

(Continued on next page)

concludes that the most robust approach is characterized by Enhanced Regional Approach #2, and states that this approach results in rates that “are somewhat higher than the Current Approach scenario”, yet no further details are provided to back-up this critical conclusion. The cost information provided in the Draft IRP is wholly inadequate to form the basis of decision-making by the MWD Board of Directors.

- 2) **Analysis of Current Local Solutions** – The San Diego region has taken the initiative in developing local water supply options to meet the future needs of our region. As mentioned previously, we are in the final stages of moving forward on the Carlsbad desalination project and have recently received final approval from the San Diego City Council to construct the IPR Demonstration Project. Other local water retailers are also in the process of developing recycled water and other local water supply projects. A leader in water conservation, San Diego has already improved our region’s water use efficiency to the point that San Diego’s urban water use in 2010 is virtually the same as it was in 1991, despite an increase in population of 700,000, an employment base growing by more than 200,000 jobs and an overall annual economy growing by more than \$100 billion. We believe agencies in other parts of the MWD service territory are currently evaluating similar projects and programs. A comprehensive database of what projects are being studied or are already under construction is not available in the IRP to determine the need for MWD to become involved in these, or any future local water supply projects. The local resources program information listed on Appendix A.5 does not provide sufficient information to determine when the projects would be online. These projects may in fact already add up to a volume of water that would meet MWD’s stated reliability standard. The Board must have an understanding of the efforts currently underway in order to assess what further investments may be necessary. Without this information, the MWD Board has no way of knowing whether it may be wasting ratepayer dollars and stranding investments.
- 3) **Buffer Supply** – The Draft IRP includes a “buffer supply” which is in excess of the amount of water needed to meet the reliability objective 100% of the time under all hydrologic conditions. We do not believe it is prudent to adopt such a large (and costly) “buffer;” instead, MWD should sharpen its planning and add projects as circumstances warrant. This can certainly be a robust and ongoing process but it should occur as part of an annual update and demonstration of need rather than as an additional volume of water for which no demand is shown.
- 4) **Impact of Further Conservation** – The IRP incorporates conservation numbers that fail to include the reduction in water demand that has already resulted from the recent conservation efforts of regional water agencies following the MWD implemented allocation. Since that time, homeowners and businesses throughout the region have significantly decreased demand. Therefore, not incorporating this information results in inaccurate statements regarding how much water supply must be created. Furthermore, many studies have acknowledged price has the greatest effect on reducing water consumption. As water rates continue to increase, demand will ultimately subside to a level that may not require the amount of new water supply MWD is planning in this IRP to create beyond what local water retailers have planned. It is unclear whether MWD incorporated the potential for reduction in demand due to pricing when drafting this report.

While we agree it is important to begin discussions with our partners throughout the Southern California region in developing a comprehensive water supply solution, this plan must not be created within a vacuum. Each water agency within the MWD service area must be accountable to its future water planning and determine if they are in need of MWD's assistance in accomplishing those goals.

While SDCTA believes in and supports necessary investment in a reliable water supply, we also believe our water ratepayers will demand a higher level of accountability than is provided by the current draft IRP. We do not expect to see scrutiny of public agency spending lessen as costs continue to rise at the same time services are being reduced.

For the reasons we articulated in this letter, we urge the MWD Board delay the adoption of this report until issues we've highlighted here are addressed. We hope these issues can be addressed during the extended discussion of the Draft IRP, and look forward to participating in the future IRP workshops. Should you have any questions, please feel free to contact me at (619) 234-6423 or lanil@sdcta.org.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lani Lutar', with a long horizontal flourish extending to the right.

Lani Lutar
President & CEO

cc: MWD Board of Directors
Mr. Jeffrey Kightlinger, MWD General Manager
Ms. Maureen A. Stapleton, San Diego County Water Authority General Manager

MWD Folks,

I am sorry that I will not be able to attend your meeting August 10th, 2010 due to an important meeting that is occurring in my City of Oceanside during the same time of your meeting so I am writing you this letter in my place please enter it into the public record as my testimony.

Part 1

Having read all the report and plans you have designed in your strategies for handling the water supplies for the next few decades I found many good ideas and a few missing elements. I shall not address the good but hit the missing one's, as I know your time is valuable.

- 1) All component agencies are not being treated equally, some have a clear bias. The public knows this and sees the bias in preferential treatment and rates. And every time we turn around you raise the rates based on your bloated administration and pay schemes. We have had enough! We demand full equality and parity for all agencies, a full vote of the people on all Board members and a public vote on all major decisions like rate increases. Your choice, the public is on the verge of revolt and asking the powers that be in Sacramento to disband MWD and establish a new agency that is responsive to the public or having SAC mandate these requirements on MWD.
- 2) Most every component agency has a reuse water pipe system that is essentially inactive in most all communities. It is time to activate these pipe systems to use this recycled/reclaimed/reused water exclusively for landscape uses. This water could be sold at cost of process and delivery, no more no less.
- 3) If we interconnect these purple pipe systems and link them a little further into agricultural zones they could supply this water to the agricultural uses at a greatly reduced cost and savings once the interconnection is in place with the necessary pumping system, which cost could be paid for over a 10 year period and would be negligible. This would shift the drinkable water to the Metro/suburban areas that they are currently using to water their farms. Right now millions of gallons are being dumped off the coast daily with no consciousness or desire to reuse/recycle or recycle. We need to think like Mulholland (sp) not like the wasteful 1950'-60's where it didn't matter how much we waste.
- 4) There needs to be the next step couple of home gray water use of water.
 - a) All newly developed homes need to be mandated in all planning codes in all cities and counties in all covered agencies to include gray water use from kitchen sinks at least where possible.
 - b) On all existing homes a refit rebate program of a similar program to the new gray water mandated program
- 5) The biggest complaint from most other states and people who see our state is the disparity of the water users especially when they fly over So Cal and they look down from above and see all the back yard pools filled to the brim and only being used a few hours a month yet being maintained and recharged regularly. This needs to be rethought with a new mindset and reality. As impressions are as real as actual facts and figures.
 - a) A new Community Pool Offset fee should be placed on all private pools during second

stage drought levels

- b) During second stage drought levels pool covers should be mandated to diminish evaporation and other actions with tax rebates that could cancel out the Community Pool Offset fee this way it would encourage folks to comply thus showing other states we are actively addressing their concerns
- 6) There has been a huge increase in low income folks due to the economy this has to be accounted and prepared for in the economic diorama and system that should come to if necessary balance or zero out if the worst continues to transpire, so the needs of all the people are met.
- 7) MWD should take in consideration all sources of water in preparation of sources and emergency back up sources of water and it must protect them and keep them from development. An example of such one is in Carlsbad/Oceanside called El Salto Water Falls and its aquifer.
- 8) MWD should work better with the So. Cal Indian Tribes, they hold many primal water rights and can be very helpful in facilitating mutual storage areas that can be beneficial for both parties especially for the Tribes that have Casinos when one considers wastewater into the mix.
- 9) The rivers and streams that lead to the Oceans traditionally have deposited their debris/silt/sand flow at the beaches. MWD and component agency damming has curtailed this therefore the shorelines have receded and have every year for over a hundred years. Because of this many beaches that once were expansive are now minimal. All component agencies of MWD owe these shoreline communities sand because of this blockage and the dams and other flow halting devices have deprived the public of this valuable resource. So MWD can either provide the resource or compensation.
- 10) MWD should have as goal a complete inventory of all rivers, streams, lakes and water bodies and this goal should be to have all of them full and flowing and until all the human needs are met and these water body goals are met the percent lacking should be measured according to the diminished capacity of the water bodies including the unmet human needs.
- 11) MWD needs to support all member agencies work into alternative work into Bio-fuels from biosolids as a secondary component of wastewater-water reuse cycle

James 'Jimmy' H Knott III

Dennis Cushman Remarks
MWD IRP Stakeholder Forum
August 10, 2010, San Diego

- Good afternoon, I am Dennis Cushman, Assistant General Manager of the San Diego County Water Authority. We have met with our member agencies and they requested that the Water Authority provide some preliminary comments and questions on the draft Integrated Resources Plan.
- We believe that the Draft 2010 IRP Update fails to account for changed circumstances and relies instead on a set of outdated policies and approaches at a time when the Southern California water world has fundamentally changed. The Laguna Declaration that the draft relies on is no substitute for comprehensive planning efforts and changes that are needed to address current and future water supply challenges. And it sends the wrong message.
- The reliability goal was not considered in the draft IRP and was instead set at meeting full-service demands at the retail level under all foreseeable hydrologic conditions. Given today's substantially changed circumstances – water scarcity in a high-water-rate environment – our customers want a choice about the level of regional reliability they want to pay for.
- Today, when more planning and better integration is needed, MWD's Draft IRP states that the future is so uncertain that a very large "buffer supply" is needed. MWD proposes to develop hundreds of thousands of acre feet of "buffer supplies" in *amounts well in excess of the water MWD itself projects will be needed to meet dry-year demands under all foreseeable hydrologic conditions*. In addition to excess buffer supplies, MWD proposes to take actions and spend even more money now so that additional projects will be "ready-to-proceed" to meet a demand that MWD's own document concedes will be fully met without these projects – or even the buffer supplies. Although it is difficult to tell due to insufficient information being provided, this strategy is likely to result in more than 1 million acre-feet of excess supplies being produced annually. Such a "plan" is neither fiscally sound nor sustainable. Our ratepayers do not need or want to pay for MWD "insurance" of this magnitude.

- The Draft Update fails to include a thorough analysis of the cost of these buffer supplies or additional project planning activities, nor does it address who will pay for these supplies and projects. This is a critical shortcoming and information which must be provided before the Board can responsibly deliberate and adopt a new IRP. But the IRP appears to be being rushed to completion and board adoption.
- Some people are reading the draft IRP -- and especially the buffer supply -- as a signal that MWD is abandoning or does not believe it will be successful in attaining the Delta Fix. Again, we believe this sends the wrong message and that MWD should focus its efforts and our ratepayer dollars first on making our imported water supplies more reliable. There is insufficient attention to this core MWD function in the Draft 2010 IRP.
- The fact that agencies will increasingly need to rely on conservation and local water supply projects does not mean that MWD's role as an imported water supplier is less important. To the contrary, it is critical that MWD focus its efforts on ensuring that Southern California's investment in the State Water Project does not become a stranded investment.
- There are more than 300 retail water agencies in MWD's service area. Cities and local agencies know best when it comes to water conservation and local supply projects. MWD's efforts to expand its traditional mission into the local water supply business will be expensive and fraught with difficulty when it becomes clear that MWD does not have the expertise, the water rights or jurisdiction over local supply development.
- The Draft 2010 IRP Update lacks a clear accounting or analysis of what water supply projects MWD's member agencies, cities and other local agencies are already developing. It assumes the region will not be able to sustain the current level of conservation, thus potentially increasing the projected demand for additional supplies. Failure to include an accounting of these resources and the effects escalating water rates will have by dampening demand could result in stranded investments across Southern California. The cost of MWD's water will rise even higher to pay for this overdevelopment of supplies, and

MWD member agencies will seek to roll-off of MWD in favor of less expensive supplies. This will exacerbate the potentially extraordinary impact on MWD rates.

- MWD’s plan does not detail what projects its member agencies or retail water suppliers plan to pursue independently from MWD. It is imperative that MWD closely coordinate and integrate its supply development with member agencies and sub-agencies to maximize efficiencies and avoid stranding supply investments. Such an effort will take more time than MWD has afforded for this IRP, but it is vital that MWD incorporate this information into the plan.
- Finally, we wanted to call to your attention some of the observations the last Blue Ribbon Committee had on MWD’s IRP – because the comments are equally, if not more applicable to the current draft report. And we wanted to leave you with some questions.
- First, the Blue Ribbon Committee was troubled by the fact that the MWD member agencies most strongly supporting big-spending projects at MWD also had the most aggressive plans to reduce their future MWD purchases and develop independent supplies. They were critical of MWD’s plan to develop costly backup capacity – or insurance – for their local supply strategies while seeking to shift these project costs to other consumers (page 23, copy attached). *Doesn’t the “buffer” supply in the current IRP suffer from the same criticism and present the same risk of escalating rates and stranded costs at MWD? If not, why not?*
- The Blue Ribbon Committee found the IRP process to be flawed because the participants were not presented with fully articulated alternative models (page 12). It found that this practice limited the participants’ understanding about the implications of different options and artificially constrained the range of options they take into account. With due respect, as noted earlier, we believe that the current draft IRP suffers from the same shortcoming. Rather than developing this IRP from the ground up – where water conservation and local water supply development are already under way – MWD has taken a top-down approach that assumes MWD must expand its role at a great cost to its member agencies. *Is MWD staff willing to recommend to the board taking the time and steps necessary now to*

better refine real planning alternatives? For example, would MWD be willing to do the kind of study the groundwater managers requested during that technical working group?

- Finally, the Blue Ribbon Committee wisely noted that, in order to achieve a water supply Southern California businesses and consumers can afford, MWD must continually weigh its spending programs against specific cost burdens at the wholesale and retail levels – an objective that will require close and continuous linkage between IRP and rate structure efforts. *Is MWD willing to address this concern and provide this information as part of the process of updating this IRP?*
- We appreciate you being here today to meet with our member agencies and stakeholders and we invite you to come back to San Diego to discuss your responses to the questions we present to you today. Thank you.



John V. Rossi
General Manager

Charles D. Field
Division 1

Thomas P. Evans
Division 2

Brenda Dennstedt
Division 3

Donald D. Galleano
Division 4

S.R. Al Lopez
Division 5

August 10, 2010

Timothy F. Brick
Chairman of the Board
Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA 90012-2944

RE: SUPPORT FOR 2010 INTEGRATED RESOURCES PLAN UPDATE

Dear Chairman Brick:

On behalf of Western Municipal Water District, I want to express our support for the Metropolitan Water District's 2010 Integrated Resources Plan Update (2010 IRP). The 2010 IRP establishes the framework for the policies, projects and programs that will ensure that Southern California has an adequate and reliable water supply for our future residential, commercial and environmental needs.

We are encouraged that the proposed 2010 IRP is an adaptive resources management plan that can change in response to the many challenges and uncertainties facing our regional water supply – including climate change, Bay-Delta restoration and other environmental concerns, and potential earthquakes. We support the implementation of a reasonable supply buffer of additional conservation and local supply projects as needed to manage through these uncertainties.

We also agree that water supply reliability can be better achieved through collaborative efforts by Metropolitan and its member agencies, including Western, and through regional partnerships amongst agencies and utilities. The 2010 IRP should continue to focus on these collaborative efforts as the region's economy, population, and supply reliability are all interconnected.

We look forward to the next steps in the process of implementing the IRP. Collaborating with the member agencies on the various details will be critical. Issues such as project costs and related rate impacts need the input of all member agencies.

We urge Metropolitan's Board of Directors to adopt the 2010 IRP.

Sincerely,

A handwritten signature in black ink, appearing to read "John V. Rossi", is written over a horizontal line.

JOHN V ROSSI
General Manager

cc: Jeff Kightlinger, MWD



NATURAL RESOURCES DEFENSE COUNCIL

August 20, 2010

Mr. Deven Upadhyay
Metropolitan Water District of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

Re: Supplemental Comments on the Draft 2010 Integrated Water Resources Plan Update

Dear Mr. Upadhyay:

We are writing on behalf of the Natural Resources Defense Council (“NRDC”) and its approximately 250,000 members and activists in California. These comments supplement the comments that NRDC submitted on July 23, 2010, and presented at several Stakeholder Forums.

NRDC applauds MWD’s commitment to integrated resource planning. A credible plan that anticipates and responds to future water supply changes is critical in light of actual and predicted impacts to California’s water resources from climate change, ecosystem degradation, the threat of catastrophic loss, and other challenges. We offer the following comments in the spirit of improving upon MWD’s ability to respond successfully to those challenges and strengthening the reliability of its water supply. In sum, we believe the Draft IRP’s estimates of increased future yield from Delta Improvements and Colorado River Aqueduct supplies are significantly overstated and highly uncertain. At best, those supplies should be designated as potential resources for planning purposes. Instead, we urge you to elevate components of regional conservation and local resources augmentation, which, according to the Draft IRP, could yield at least 230 thousand acre-feet (“TAF”) of new supply by 2015 and 500 TAF of new supply by 2035, to the “core resources strategy” and to increase estimates of yield from other, more reliable local and regional sources.

I. The IRP Should Not Count on an Increasing Delta Supply.

MWD has prepared several long-term water supply assessments in recent years, including the 1996 IRP and the IRP Update in 2004. Both of these documents recognized the unreliability of MWD’s State Water Project (“SWP”) supply due to environmental degradation and fisheries declines in the Delta, yet still predicted future yields from the SWP would increase due to planned efforts to improve environmental conditions in the Delta, such as the 1994 Bay-Delta Accord and the 2000 CALFED Record of Decision. However, neither of these efforts resulted in the anticipated improvements,¹ and the Delta ecosystem is widely considered to be in far worse

¹ While some environmental indicators did show improvement in the Delta in the 1990s, such as salmon populations, those improvements were erased during the extensive increase in Delta exports during the 2000s, which included five of the six years with the historically highest levels of exports out of the Delta.

NRDC Supplemental Comments on the Draft 2010 Integrated Water Resources Plan Update
August 20, 2010

condition today than at any previous time. As a result, in each successive release of the IRP, MWD has had to reduce its future targets for SWP supplies during dry years. For example, as illustrated in the table below, the draft 2010 IRP calls for a dry year SWP target for 2010 that is 163,000 AF lower than the target included in the 1996 IRP, and the 2020 target is 69,000 AF lower than the target set in the 2004 IRP.

State Water Project Dry-Year Supply Targets
(Acre-Feet)²

	2003	2010	2020	2025
1996 IRP Target	283,000	593,000	593,000	N/A
2004 IRP Update	418,000	463,000	650,000	650,000
2010 Draft IRP	N/A	430,000	581,000	713,000

NRDC agrees that activities aimed at improving the physical stability of and enhancing the environmental health of the Delta will reduce the threat of a catastrophic loss of SWP supplies and increase the predictability of a long-term sustainable supply and should be implemented. However, the outcome of these activities should not be interpreted as increasing SWP yield. Considering that the SWRCB unanimously adopted the Delta Flow Criteria Report on August 3rd, which would significantly reduce exports by the SWP and the CVP beyond the limitations in the existing biological opinions,³ the expected water supply impact of activities designed to remediate environmental impacts in the Delta will likely be lower than the values stated in the 2010 IRP.

Moreover, there is a high degree of uncertainty associated with any estimate, as the water supply benefits will depend on the exact configuration of the improvements, which environmental protections remain in place, and exogenous factors such as climate change. This uncertainty should be reflected in the IRP. The proposed Two-Gates project, which the IRP assumes will result in 151 TAF dry-year increase by 2015, will, according to the IRP, only provide additional supplies in years when the SWP allocation is above 35% (IRP at 4-3). As the SWP allocation during a dry year will likely be lower than 35%, any additional water supply from the proposed Two-Gates project should therefore not be included in dry year analyses. In addition, as mentioned in the IRP, a number of steps on the critical path to approval and implementation of the Two-Gates project have yet to be completed, and it is uncertain if the project will proceed as planned and on time. Similarly, completion of the Bay Delta Conservation Plan (BDCP) faces even greater approval and implementation risks, and the expected water supply outcome of that project remains to be fully determined.

² The 1996 IRP and 2004 IRP Update numbers are taken from Table 3-5 in the 2004 IRP Update (p. 3-9). The 2010 Draft IRP numbers are taken from Table 1-3 in the 2010 Draft IRP (p. 1-13, SWP Existing Imported Supplies) and Table 6-1 (p. 6-3, Delta Improvements Core Resources). We assume that the “dry-year” hydrology on which these estimates are based are comparable.

³ See, e.g., Mike Taugher, “Delta water users dismiss call for steep cutbacks,” San Jose Mercury News, August 4, 2010, available online at: http://www.mercurynews.com/ci_15678388?source=most_email&nclick_check=1.

There is a possibility that SWP supplies may increase in the future if the Delta ecosystem recovers and stabilizes. However, there is currently a great deal of uncertainty about how and when Delta improvements will be implemented and recovery will occur. For planning purposes, it would be far more prudent for MWD to assume that SWP supplies do not increase. At best, future increases in SWP supplies should be designated as a potential resource that may be appropriate to develop as a supply buffer.

II. The IRP Should Not Assume a Full Colorado River Aqueduct During Dry Years.

Similar to its treatment of the SWP, the core resource strategy in the IRP includes the overly optimistic goal of maintaining a full CRA during dry years. Achieving full flows in the aqueduct will be challenging, given “short-term programs are not yet in place to provide the full targeted amount” (see IRP p. 4-7), long-term programs are not explicitly mentioned in the IRP, and the availability of water is uncertain. A 2009 publication in the Proceedings of the National Academies of Science indicates climate change will reduce runoff in the Colorado River Basin by 10-30%, resulting in dramatic reductions in deliveries. “If climate change reduces runoff by 10%, scheduled deliveries will be missed 58% of the time by 2050. If runoff reduces 20%, they will be missed 88% of the time.”⁴ The willingness of entities to transfer water to MWD in the face of such cutbacks cannot be relied upon. Even if transfers were to be implemented, a decrease in runoff will reduce or eliminate the availability of surplus water and impact storage, a key component in MWD’s plans to maintain a full CRA. (See IRP p. 4-9.)

III. Regional Compliance with 20X2020 Should Be Part of Component 1: the Core Resource Strategy.

We are heartened to see MWD has included compliance with SB 7X 7 (20X2020) as part of the IRP. However, regional compliance must be considered part of the core resource strategy rather than as a component of the buffer. SB 7X 7 requires a statewide 20% reduction in per capita urban water use by 2020. Retail suppliers are allowed to select between the four methods developed for setting a target. However, as per section 10608.42, adjustments to those targets and to water efficiency standards will be made to ensure the full 20% reduction is achieved. Thus, regional level compliance is mandated.

Incorporating regional compliance as part of the supply buffer, rather than the core resource strategy, inherently contradicts the 20X2020 mandate for two reasons. The first is regional compliance with 20X2020 requires the entire water efficiency target of the supply buffer be implemented. Yet, during Brandon Goshi’s presentation at the Ontario IRP Stakeholder Forum, he stated he was “not suggesting the entire supply buffer should be implemented, rather the region would see which resources would make sense to implement.”⁵ Moreover, Table 4-9 of

⁴ Barnett, TP and Pierce, DW (2009) “Sustainable water deliveries from the Colorado River in a changing climate,” Proceedings of the National Academy of Sciences of the United States of America, **106** (18) : 7334–7338. DOI 10.1073/pnas.0812762106 2009.

⁵ Staff presented a different view at the San Diego IRP Stakeholder Forum, indicating that conservation elements of the buffer would be implemented, but not other elements of the buffer. Given the lack of clarity on implementation of “buffer” resources, and the critical importance and effectiveness of regional

the IRP states that the supply buffer will constitute “up to 10% of retail demand.” Both of these statements indicate MWD does not expect the full buffer will be implemented. That the IRP also lacks a stated time frame for development of the supply buffer, even though target dates were set for each element of the core resource strategy, reaffirms this lower priority for regional compliance.

Second, the supply buffer is intended to provide a backup source of water, deployable if the core supplies are unexpectedly insufficient to meet demands. Yet for regional compliance with 20X2020, water efficiency measures leading to a 20% reduction in per capital demands must be deployed. The designation of water efficiency supplies as contingency measures would not count towards 20X2020 compliance. Nevertheless, short-term conservation measures, such as mandatory use restrictions, are suitable for addressing immediate reductions necessary when supplies unexpectedly do not meet demands, and NRDC recommends their inclusion in the supply buffer as a separate measure above and beyond compliance with 20X2020.

In order to achieve regional compliance with 20X2020, a scale increase in conservation will be necessary. The IRP (page 4-14) reports the current cost of water to MWD is \$195/AF, which is also the maximum incentive provided for member agency water conservation activities. NRDC and other agencies have repeatedly questioned this cost, as water conservation offsets not only water supply costs, but pumping and treatment costs and improves system reliability. MWD’s avoided cost should be updated and the incentive changed to represent the true value of conservation to the region.

Considering these benefits of water conservation, regional compliance with 20X2020 should be treated as a minimum target for water efficiency and the IRP should include a commitment to adopting a mechanism that encourages procurement of all water efficiency resources that are cost-effective. Water efficiency should not come to a standstill after 2020, as indicated in the projections in Table 6-1. Rather, cost-effective additions to the water efficiency portfolio should continue indefinitely into the future.

IV. The IRP Should Increase Reliance On and Investment In More Certain Regional Supplies

The choice in the Draft IRP to include increased SWP supplies and a full CRA as key components of the core resource strategy signifies that MWD is making a deliberate choice to bet the region’s future water supply on significantly increasing yield from a yet-to-be-defined Delta fix (a bet that has proven to be a poor one in the past) and uncertain Colorado River supplies, as well as relegating intensive development of local resources to the buffer, where those supplies may not be pursued at all.⁶ We urge MWD to rethink this choice and identify aggressive augmentation of local and regional supplies as the core strategy for the future.

conservation at improving water supply, we strongly urge MWD to revise the IRP to include this component in the “core resource strategy.”

⁶ As discussed above, the IRP is unclear regarding when and whether buffer supplies will be developed. However, at the San Diego IRP Stakeholder Forum, staff indicated that the conservation elements of the buffer would likely be implemented, but not other elements, including the several hundred thousand acre-

The IRP indicates that substantial supplies could be developed by augmenting local resources, identifying nearly half a million acre-feet in water recycling projects, more than 150 TAF in groundwater recovery projects, and additional supplies from improved stormwater capture and reuse. In light of this information, the overall target for local resource development within the “core resources strategy” as well as the buffer should be increased, especially considering the overly optimistic targets for SWP and CRA aqueduct supplies. The draft IRP does not set specific targets for each category of local resources, so as to allow for local flexibility and encourage implementation of the most appropriate and cost-effective supplies. We are not recommending such specific targets be set; however, the overall quantity of local resource development should reflect the availability of such resources as is detailed in the report, including the availability of recycled water, groundwater, and stormwater.

A. The IRP Indicates That Identified Water Recycling Projects Could Yield Almost 500,000 Additional Acre-Feet Over The Planning Horizon.

The Draft IRP acknowledges that “significantly more wastewater ... could potentially be recycled” in Southern California and that recycled water has the substantial advantage of “being a drought-proof supply.” P. 2-7. The Draft IRP concludes that “there are opportunities within the Metropolitan service area to develop large-scale regional water recycling ... that could significantly enhance Southern California’s supply reliability and water independence,” p. 3-3, yet does not appear to propose aggressively pursuing those options.

For example, Appendix A.5 identifies specific water recycling projects within MWD’s service area that have already generated in excess of 600,000 acre-feet of water, and additional projects that are under construction, in various stages of the planning and approval process, or in conceptual form that could generate an additional approximately 480,000 acre-feet of water. (See Pp. A.5-1 to A.5-6.) Yet, Table 4-7 of the Draft IRP only identifies yield from existing recycling projects of 353,000 acre-feet in 2015 to 430,000 acre-feet in 2035. (See P. 4-23.) These estimates appear to significantly undervalue the amount of recycled water yield already available in MWD.

Moreover, the augmented supply projected from all local resources augmentation under the core resources strategy ranges from only 16,000 acre-feet in 2015 to 46,000 acre-feet in 2035. (See Table 6-1, p. 6-3.) Again, this appears to severely underestimate the potential available from specific water recycling projects that have already been proposed, which Appendix A.5 indicates exceeds 480,000 acre-feet.

It appears that water recycling has been incorporated to some extent into the targets for 20X2020 compliance, yet given the large potential for water recycling that exists in the region, it should be included above and beyond those targets. We urge MWD to modify its approach to accurately reflect the yield from existing water recycling projects in its existing supplies, and to include

feet of supplies identified under “local resources augmentation.” The IRP lacks a rational explanation for this choice. Therefore, we urge MWD to include these supplies in the “core resources strategy.”

identified water recycling projects in its core resources strategy.⁷ These projects promise far more “drought-proof” yield than the uncertain 283,000 acre-feet anticipated from Delta Improvements by 2025.

B. The IRP Indicates That Increased Groundwater Recovery Efforts Could Yield 163,000 Additional Acre-Feet.

Similarly, Appendix A.5 identifies a large number of specific complete and proposed groundwater recovery projects that appear to provide the potential for additional increased regional yield. Existing groundwater recovery projects currently yield more than 150,000 acre-feet according to Appendix A.5, pp. A.5-6 to A.5-7, yet Table 4-7 identifies only 122,000 acre-feet available from this source in 2015. P. 4-23. While that number increases to 150,000 acre-feet by 2035, it still appears to exclude the additional 163,000 acre-feet in new supplies from proposed groundwater recovery projects identified in Appendix A.5. Pp. A.5-7 to A.5-8.

C. Expanded Stormwater Capture and Reuse Could Yield Additional Local Resources by 2020.

Stormwater capture and reuse is not new to MWD’s service area. “From 1995 to 2004, an annual average of about 477,000 acre-feet of stormwater runoff was captured in spreading basins or other centralized facilities for groundwater recharge within the Metropolitan service area.” P. 2-12. Nevertheless, there remains significant untapped potential for stormwater capture and reuse: “in the urban areas alone, there is estimated to be an average of more than 1 million acre-feet of stormwater per year that is not captured in the Metropolitan service area.” P. 2-12. It is not clear whether or how the IRP incorporates enhanced stormwater capture and reuse projects in its estimates of existing and future water supply. The document should be revised to clarify the potential yield from this source and whether it is included in the core resource strategy, buffer or elsewhere.

V. Implementation

During the IRP forum, MWD staff (Deven Upadhyay, Debra Man, Jeffrey Kightlinger, and Brandon Goshi) each made clear that the IRP sets out planning goals for the region, yet is not a guide for implementation. Development of programs that will lead to achievement of these goals is the next step. Nonetheless, the IRP needs to demonstrate practicability. At minimum, this means it should include a stated pathway for how implementation plans will be developed and a timeline for their development. In NRDC’s previous comments on the draft, we recommended MWD include in the IRP information on the monitoring criteria and triggers that are necessary to implement an adaptive management strategy. Implementation plans need to be provided for ALL of the resources: the core resources, the supply buffer, and the adaptive management strategy. This includes not only information on when the long-term conservation program and

⁷ If MWD has failed to include these projects due to cost or some other analysis that is not included in the IRP, the document should be revised to reflect that analysis and allow input on the calculations and analysis.

NRDC Supplemental Comments on the Draft 2010 Integrated Water Resources Plan Update
August 20, 2010

the local resources program will be evaluated and revised, but also details on implementation activities designed to secure water resources from the SWP and the CRA.

VI. Conclusion

As the Draft IRP recognizes, “[w]ithout regional investments in conservation, storage and the local resources projects program, Metropolitan would have been forced to impose shortage supply allocations two years earlier and a more severe 25 percent cutback instead of a 10 percent cutback in 2009 and 2010.” Draft IRP at ES-4. We urge MWD to refocus the IRP and its future water supply efforts on these proven water supply tools, to prioritize regional compliance with 20X2020, and to discontinue the failed strategy of counting on a far greater future yield from the Delta based on unproven and undefined structural measures.

Thank you for the opportunity to provide our input.

Sincerely,



Edward R. Osann
Senior Policy Analyst



Katherine S. Poole
Senior Attorney

cc: Jeffrey Kightlinger
Linda Waade



17140 S. Avalon Blvd., Suite 210, Carson CA 90746 310-217-2411 www.westbasin.org

August 23, 2010

Timothy F. Brick
Chairman of the Board
Metropolitan Water District of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

Dear Mr. Brick:

SUPPORT FOR 2010 INTEGRATED RESOURCES PLAN UPDATE

On behalf of the Board of Directors of West Basin Municipal Water District (West Basin), I wish to express our support for the 2010 Integrated Resources Plan Update (IRP Update) and urge the Directors of Metropolitan Water District (MWD) to adopt this important plan and re-affirm MWD's historic commitment to the region's water reliability under the Laguna Declaration.

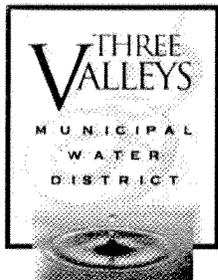
We commend MWD for proposing an adaptive resource development plan that can achieve reliability goals through a "Core Resources Strategy" if all goes well, but can also change in response to future water supply uncertainties. These uncertainties can include Delta restoration, potential earthquake, and changing legal, environmental, and regulatory conditions that result in implementation risk. We agree that this risk can be mitigated through the development of the recommended "Supply Buffer" that avoids costly supply shortages through prudent investments in additional water use efficiency and local supply yield.

Finally, West Basin strongly supports MWD being afforded the flexibility to evaluate greater involvement in regional supply development through the formation of new partnerships, expanding financing options beyond providing incentives, and becoming part- or full-owners in local projects.

Sincerely,

Gloria D. Gray
President, Board of Directors

cc: Jeff Kightlinger, MWD



BOARD OF DIRECTORS

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GENERAL MANAGER/CHIEF ENGINEER
Richard W. Hansen, P.E.

August 24, 2010

Timothy F. Brick
Chairman of the Board
Metropolitan Water District of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

RE: SUPPORT FOR 2010 INTEGRATED RESOURCES PLAN UPDATE

Dear Chairman Brick:

On behalf of the Three Valleys Municipal Water District (TVMWD), I want to express our support for the Metropolitan Water District's 2010 Integrated Resources Plan Update (2010 IRP). The 2010 IRP establishes the framework for the policies, projects and programs that will ensure that Southern California has an adequate and reliable water supply for our future residential, commercial and environmental needs.

We are encouraged that the proposed 2010 IRP is an adaptive resources management plan that can change in response to the many challenges and uncertainties facing our regional water supply, including climate change, Bay-Delta restoration and other environmental concerns, as well as potential earthquakes. We support the implementation of additional conservation and local supply projects needed to manage through these uncertainties.

We also agree that water supply reliability can be better achieved through collaborative efforts by Metropolitan and its member agencies, including TVMWD, and through regional partnerships amongst our local member agencies. The 2010 IRP should continue to focus on these collaborative efforts as the region's economy, population, and supply reliability remain interconnected.

We thank you for your leadership and we urge the Metropolitan Board of Directors to adopt the 2010 IRP. If TVMWD can be of assistance, please do not hesitate to contact me at 909-621-5568.

Sincerely,

Richard Hansen
General Manager/Chief Engineer
Three Valleys Municipal Water District

cc: Jeff Kightlinger, MWD



City of Corona
Department of Water and Power
"Protecting Public Health"

Office: 951.736.2234
Fax: 951.735.3786

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Corona, CA 92880 – www.discovercorona.com

August 26, 2010

Timothy Brick
Chairman of the Board
Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA 90012-2944

Subject: Support for 2010 Integrated Resources Plan Update

Dear Chairman Brick:

The City of Corona Department of Water and Power would like to express our support for the Metropolitan Water District's 2010 Integrated Resources Plan Update (2010 IRP). The completion and adoption of the 2010 IRP will lay the groundwork for the policies, projects and programs that Southern California will need to ensure that there is an adequate, reliable and clean supply of water.

The 2010 IRP identifies many key strategies that will ultimately help mitigate the region's water supply issues. Creating a planning buffer, utilizing an adaptive implementation approach to supply management, and understanding the necessity of providing both financial and technical support to member agencies and sub-agencies are important factors that the 2010 IRP addresses. And, the 2010 IRP underscores Metropolitan's recognition that supply reliability solutions must be balanced with implementation costs in order to limit the impact on water rates and that these costs must also be applied appropriately to ensure equity.

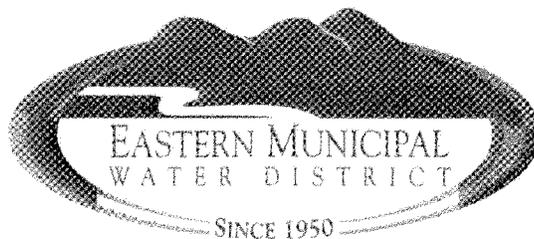
The City of Corona Department of Water and Power urges Metropolitan's Board of Directors to adopt the 2010 IRP.

Please don't hesitate to contact me if you wish to discuss this matter further. I can be reached at (951) 736-2477 or by e-mail at jonathan.daly@ci.corona.ca.us.

Sincerely,

Jonathan Daly
General Manager

c: Jeff Kightlinger, MWD
John Rossi, WMWD General Manager



Board of Directors

August 26, 2010

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David J. Slawson

Metropolitan Water District of Southern California
Jeffrey Kightlinger
Post Office Box 54153
Los Angeles, CA 90054-0153

**SUBJECT: Expanding Graywater Use as Part of the Integrated
Resources Plan**

Board Secretary

Rosemarie V. Howell

Dear Mr. Kightlinger,

General Manager

Anthony J. Pack

Eastern Municipal Water District (EMWD) has reviewed the Draft 2010 Integrated Resources Plan Report and has concerns about promoting the use of graywater throughout the region as proposed; especially if the aggressive schedule proposed in Option C is implemented.

*Director of the
Metropolitan Water
District of So. Calif.*
Randy A. Record

EMWD has an active wastewater collection and treatment program that aggressively uses recycled water. This program could be significantly impacted with the expanded use of graywater. If graywater systems were installed in great quantities the flows at the wastewater treatment plants would be reduced and the sewage characteristics would change having higher solids content. The impacts to EMWD's wastewater collection and treatment system include:

Legal Counsel
Redwine and Sherrill

- Reduction in flows; and increase of the collection system hydraulic capacity.
- More concentrated flow lowering the velocity resulting in solids settling inside the pipe, especially in flatter/low slope pipe segments requiring more maintenance.
- Increases in odor, septic and corrosion issues requiring more maintenance.
- Wastewater treatment plant hydraulic loading reduction without the organic or nutrient loading reduction. Requiring less tankage and more equipment such as pumps, blowers, baffles, etc. to ensure adequate flows and treatment.
- Reduced phosphate in the flow can impact the existing beneficial uses.
- Extensive gray water use could impact the peaking design at the wastewater treatment plants.
- Extensive use of graywater could impact groundwater basin water qualities.

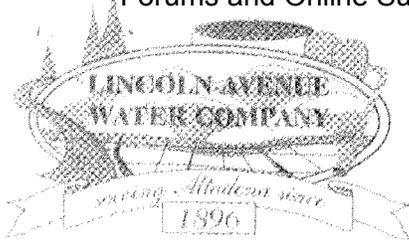
Jeffrey Kightlinger
August 26, 2010
Page 2

The effect of expanded graywater on existing wastewater collection and treatment systems should be evaluated before proposing the use of graywater in the IRP.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Pack". The signature is fluid and cursive, with the first letter of each word being capitalized and prominent.

Anthony J. Pack
General Manager



August 27, 2010

Timothy F. Brick
Chairman of the Board
Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA 90012-2944

564 WEST HARRIET STREET
ALTADENA, CALIFORNIA 91001-4571
(626) 798-9101
FAX (626) 798-9448

RE: Support for 2010 Integrated Resource Plan Update

Dear Chairman Brick:

*The mission of the
Lincoln Avenue
Water Company
is to reliably provide
to its customers and
shareholders high quality
water, service, and
maintenance of the
Company's resources
in an environmentally
and fiscally responsible
manner.*

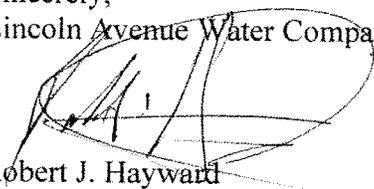
On behalf of Lincoln Avenue Water Company I want to express our support for the Metropolitan Water District's 2010 Integrated Resources Plan Update (2010 IRP). The 2010 IRP establishes the framework for the policies, projects and programs that will ensure that Southern California has an adequate and reliable water supply for our future residential, commercial and environmental needs.

We are encouraged that the proposed 2010 IRP is an adaptive resources management plan that can change in response to the many challenges and uncertainties facing our regional water supply – including climate change, Bay-Delta restoration and other environmental concerns, and potential earthquakes. We support the implementation of a reasonable supply buffer of additional conservation and local supply projects as needed to manage through these uncertainties.

We also agree that water supply reliability can be better achieved through collaborative efforts by Metropolitan and its member agencies, and through regional partnerships amongst agencies and utilities. The 2010 IRP should continue to focus on these collaborative efforts as the region's economy, population, and supply reliability are all interconnected.

We urge Metropolitan's Board of Directors to adopt the 2010 IRP.

Sincerely,
Lincoln Avenue Water Company



Robert J. Hayward
General Manager

cc: Jeff Kightlinger, MWD



September 3, 2010

Mr. Tim Brick, Chairman
Metropolitan Water District Metropolitan Water District
of Southern California
P. O. Box 54153
Los Angeles, CA 90054-0153

Dear Chairman Brick:

2010 INTEGRATED RESOURCES PLAN UPDATE

As the Metropolitan Water District (MWD) Board of Directors is in the process of finalizing its 2010 Integrated Resources Plan Update (IRP), the Municipal Water District of Orange County (MWDOC) would like to take this opportunity to express our support for following key elements of the IRP:

- Continuing to develop and invest in a diversified water supply portfolio;
- Reaffirming MET's role as the the regional provider, as clearly stated in MET's mission statement and the historic Laguna Declaration;
- Using an "Adaptive Management" approach that seeks to mitigate risks beyond hydrology;
- Allowing the flexibility to further develop local supplies through partnerships, other financial options, and ownership opportunities;
- Creating an implementation supply buffer that will help avoid costly supply shortages through prudent investments in additional water use efficiency and local supply yield; and
- Including a regional 20x2020 water use efficiency target.

We commend MWD for moving forward with a planning document that represents a comprehensive and responsible approach to meeting the region's future water needs in light of the many risk and uncertainties we face beyond hydrology. We believe through collaboration with the member agencies and the implementation of these key elements we can achieve our long-term reliability goals.

As the IRP further develops, we looking forward to providing additional comments and suggestions at the time of final adoption.

Joan C. Finnegan
President, Board of Directors

A handwritten signature of Joan C. Finnegan in black ink.

cc: MWDOC MET Directors
Jeff Kightlinger, MWD

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Director

Larry D. Dick
Director

Susan Hinman
Director

Ed Royce, Sr.
Director

Kevin P. Hunt, P.E.
General Manager

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