

Attachment B

City of Los Angeles IRP Steering Group Workshop No. 9 February 19, 2004

FEEDBACK REPORT

1. Provide IRP recommendations to Department of Recreation & Parks to get advocates for change.

IRP staff is continuing to work with the Department of Recreation and Parks to advocate change that is necessary to meet the goals of the IRP. IRP Staff recently presented the IRP agenda to the Department of Recreation & Parks at their department management meeting, and we are setting-up a meeting with the department's new general manager, Jon Mukri.

2. Why did the effort to include the recycled water pipeline with the construction of the MTA East West Bus-Way fail?

The Department of Water and Power (DWP) had planned to use most of the available recycled water from the Tillman Water Reclamation Plant for the East Valley Water Recycling Project (up to 35,000 acre-feet/year). Initially, the East Valley Recycling Project was planned, design and constructed to deliver recycled water to the groundwater recharge spreading grounds in the East Valley, but before the project began operation, the direction of the project was changed to use the recycled water for the more traditional recycled water uses of industrial and irrigation. One of the scope changes included a recycled water pipeline along the MTA's East West Bus-Way. The MTA had already entered into a design/build contract for the Bus-Way. This contract gave the contractor control of the construction schedule and sequencing; however, there are significant penalties for delay of the opening of the Bus-Way. Including the recycled water pipeline as a change order to the contract would introduce a significant risk to meeting the Bus-Way opening date. Consequently, the cost of the pipeline was estimated to be 2 to 4 times the cost of a separate pipeline construction project. For these reasons, the DWP and MTA jointly decided to no longer pursue the option of adding the pipeline to the Bus-Way construction contract.

However, MTA is making changes to the Bus-Way project's irrigation system to utilize recycled water in the future when the DWP pipeline is complete and operational.

3. For the failed attempt to add the recycled water line to the Bus-Way construction contract, we can learn how to change policies and have better negotiations between agencies and contractors to get these types of things done.

Fostering effective participation between agencies is a primary element of the IRP process, which should result in improved agency cooperation.

4. Instead of looking at the recycled water as half the cost of potable water, we should look at recycling water as a cost savings because of the high cost associated with treating to the levels required to discharge to the Los Angeles River. The Mayor and other City

officials should have used their influence to help negotiate the MTA Bus-Way contract to include the recycled water line.

No response required.

- 5. The City should have been looking at other options to use the recycled water from the Tillman Water Reclamation Plant other than just the East Valley Water Recycling Project. If they had looked at other options, then they would have recognized that they could add the recycled water line to the MTA Bus-Way construction during the planning stage 10 years ago.**

The East Valley Water Recycling Project was planned and designed to use most of the available recycled water from the Tillman Water Reclamation Plant (up to 35,000 acre-foot/year). After the direction of the East Valley Water Recycling Project was changed, the constructed facility was no longer adequate to deliver a large amount of recycled water to the end users (for industrial and irrigation uses) and additional facilities are needed to pipe the recycled water to the end users.

- 6. The City should look at extending a recycled water pipeline from the Los Angeles/Glendale Water Reclamation Plant to service center city where they can use the water instead of from the Tillman Water Reclamation Plant to Pierce College.**

In the four proposed hybrid alternatives that were discussed, there is an option to expand the Los Angeles/Glendale Water Reclamation Plant and use more recycled water. The DWP has been planning a project to deliver recycled water from the Los Angeles/Glendale Water Reclamation Plant to the central city area including possibly Elysian Park, Taylor Yard and the “cornfield” near the Los Angeles River.

- 7. As the City, LA Unified School District, and the community colleges have adopted a policy of sustainable building, we need to adopt parallel policies of using native plants, multi-benefit projects, using recycled water, and water conservation, and the City should advocated the MTA to adopt those policies as well. The City has a lot of votes on the MTA.**

No response required.

- 8. For the wastewater hybrid 2 series, what do you mean by expanding Tillman to 80 mgd? Isn't Tillman already at 80 mgd?**

The Tillman Water Reclamation Plant was originally designed and constructed in two modules of 40 million gallons per day (mgd) capacity in each module making the current plant capacity 80 mgd. The regulations that require more removal of nitrogen requires more treatment and reduces the plants capacity to 64 mgd. For the hybrid alternatives, we assumed that the regulation for the lower nitrogen levels has been met so to treat 80 mgd, the plant would have to be expanded by 16 mgd to get it back to where it was before the nitrogen removal facilities were built.

- 9. If we use the recycled water for beneficial uses instead of discharging to the Los Angeles River, we don't have to treat the water to the higher than drinking water standards and remove nitrogen.**

The recycled water being discharged to the Los Angeles River has created a benefit with the establishment of the ecosystems in the so-called unlined bottom areas of the river, and the reclamation plants must discharge enough recycled water to the river to maintain a baseline flow for those benefits per State and Federal regulations. We also must provide recycled

water to Lake Balboa, the Japanese Garden Pond, and the Wildlife Lake in the Sepulveda Basin. Since these waterbodies drain into the river, we have to raise the treatment level to meet these requirements plus the flow that maintains the soft-bottom area ecosystems. Furthermore, during wet weather, recycled water demand is greatly reduced, necessitating the ability to treat the entire plant flow to a quality sufficient for discharge to the river.

10. The City is already not in compliance with the lower nitrogen standards and the recycled water infrastructure is not in place to distribute it to the users so the treatment plants have to be de-rated to comply with the regulations.

The City is currently constructing the nitrogen facilities at the Tillman and Los Angeles Glendale plants to meet the new nitrogen levels. The City is in compliance with the Nitrogen TMDL as the Nitrogen TMDL gave the City until 2007 to comply with the new limits, and interim limits to comply with until the City finishes building the new facilities. The issue of derating is not related to the recycled water system, but to the actual plant itself. The City is retrofitting the existing plant with the nitrogen removal system. The retrofitting of the existing system will cause the derating. The plant must be capable of always discharging its full flow to the river for times when the recycled water demand is low to non-existent (i.e., no irrigation needs when it is raining).

11. For the hybrids A, B and C water management levels, do only B and C manage the wet weather runoff, or does A also manage some wet weather runoff?

The A hybrids (minimum levels of water management) manage a smaller level of the wet weather urban runoff (only about 10%), whereas the B and C levels manage around 40 % and 50%, respectively, of the wet weather urban runoff. For the A hybrids, we assumed that the minimum level of wet weather runoff that could be managed to meet the Santa Monica Bay TMDL was 10%.

12. With population and usage growth, are the A levels of Hybrids alternatives even reasonable alternatives?

The A level of water management hybrid alternatives are good building blocks, but as they were evaluated, the A level hybrid alternatives did not perform very well based on the objectives that the stakeholders provided.

13. Do the minimum level of water management hybrid alternatives (A levels) take into consideration the impact of the Standard Urban Stormwater Management Plan (SUSMP) over the next 20 years, and was the impact of SUSMP factored into the 10% level of wet weather runoff management?

For the A level hybrid alternatives, the 10% wet weather runoff management did not take into consideration the impact of the SUSMP requirements on new developments.

14. What is the current and build out capacity of the Hyperion Treatment Plant?

The current capacity of the Hyperion Treatment Plant is 450 mgd, and there is room on the site available to expand to 550 mgd (total build-out capacity). But the flow projections show that we only need up to 500 mgd at Hyperion by 2020 under Alternative 1, and no need to expand the Secondary Treatment facilities under alternatives 2 and 3, so we will not need the total build-out capacity at Hyperion in 2020. The City will need to add about six new digesters to the solids handling process by 2020.

15. What is the renewable energy contribution of each of the wastewater hybrid alternatives, and what is the current renewable energy contribution at the Hyperion Treatment Plant?

We do not have an estimate of renewable energy contribution for each wastewater hybrid at this time. However, currently at the Hyperion Treatment Plant there are 17 megawatts of power generation from the methane gas recovered from the digesters out of a plant demand of 19.5 megawatts. This renewable energy is equal to the electrical demands of 40,000 homes.

16. For the Water Management A, B and C alternatives in the Hybrid Alternatives Matrix, please explain the minus signs under the recycled bullets.

The small squiggly sign under the recycled bullet in the Hybrid Alternatives Matrix is not a minus sign. It is a tilde sign that is commonly used to represent the word “approximately”. So for the A levels of water management, we mean that there will be approximately 20,000 acre-feet per year additional recycled water used.

17. How much energy is needed to run the Hyperion Treatment Plant, and what time frame is the 17 megawatts recovered?

The Hyperion Treatment Plant has a demand of approximately 19.5 megawatts to operate and approximately 17 megawatts of energy is recovered per day from its digester gas that it produces onsite. The digester gas is used at the adjacent DWP Scattergood Power Plant as fuel, and converted into electricity that is sent back to Hyperion. The gas and the power are produced continuously throughout the day.

18. Would we get economy of scale by building the full build-out capacity of Hyperion when it is expanded instead of only building as little as is needed?

For the IRP, we only considered expanding Hyperion by the number of reasonable modules necessary to accommodate the 2020 flows. A reasonable expansion module for the Hyperion Treatment Plant is 50 mgd, and only one 50 mgd module will be necessary to accommodate the 2020 flows. During the preliminary design stage of the Hyperion expansion, we would look at the cost efficiency and the economy of scale concept in determining if the City should add both 50 mgd expansion modules at the same time.

19. What concepts are considered for the advanced treatment at the upstream water reclamation plants?

The advanced treatment methods that we assumed for the IRP, if it is needed to meet future regulations, is membrane technology of some sort (microfiltration followed by reverse osmosis is the current standard). The membrane technology was assumed as a filler to compare the cost of the alternatives. There are other advanced treatment technologies that can be used, and during preliminary design, we will compare, in more detail, the reliability versus cost of all advanced treatment technologies to determine the best treatment method to meet the future regulations. We assume that only the upstream plants may require advanced treatment in the future and that the Hyperion Treatment Plant will remain a secondary treatment facility. This is a planning assumption or placeholder, as we do not know what the actual regulations will be in 2020 that will actually dictate the level of treatment to be required.

20. The reverse osmosis treated water will be very high quality water; such high quality that we could consider putting it directly into the drinking water supply.

If reverse osmosis is used as the advanced treatment method, the product water will be very high quality water and would very likely meet all drinking water standards, but the current City policy is to not use any recycled water for either direct or indirect augmentation of the drinking water supply. Also, current regulations prohibit the use of recycled water of any quality for direct drinking water augmentation.

21. Do the wastewater series 1, 2 and 3 hybrid alternatives work the same way as the A, B and C alternatives for the water management levels (i.e. minimum, moderate and high levels)?

No. The three hybrid alternatives for the wastewater are three separate and independent ways of meeting the 2020 wastewater flow projections, and they do not build on one another (i.e., series 2 does not treat more flows than series 1, and series 3 does not treat more flows than series 2). All three wastewater hybrid alternatives series (1, 2 and 3) have the same treatment and conveyance capacity. In contrast, the A, B and C hybrid alternatives for water management do build on one another. The A alternative is the minimum level of water management. The B alternative is the moderate level of water management and adds additional benefits. The C alternative is the high level of water management and adds even more additional benefits.

22. Are there any options in the hybrid alternatives to capture and beneficially reuse the runoff from the south side of the Santa Monica Mountains (Hollywood side of the mountains)?

We have detailed maps that show the location of the recycled water lines and the urban runoff projects for each of the nine hybrid alternatives. For the south side of the Santa Monica Mountains, alternatives 1A, 2A and 3A proposes two new wet weather urban runoff plants in the coastal area, and in addition to these benefits, alternatives 1B, 2B, 3B, 1C, 2C, and 3C proposes two new dry weather urban runoff plants for beneficial reuse (one in Compton Creek and the other at Ballona Creek at Start St).

23. In the cost vs. benefit quadrant analysis, who's the beneficiary, i. e. how is benefit defined?

The benefit is defined for each service function. For wastewater service function, the benefits are defined as high if we enhance capacity at the existing upstream treatment plants; the benefits are considered as medium if we enhance capacity at Hyperion Treatment Plant; and they are considered as low if we build new plants. For the recycled water service function, the benefits are defined as high if there is a high volume of recycled water to use and a high connectability; the benefits are considered as medium if there is a high volume of recycled water to use but a low connectability; and they are considered as low if there is a low volume of recycled water to use and a low connectability. For the dry and wet weather runoff service functions, the benefits are defined as high if there is a high volume of runoff managed and a high beneficial use of the runoff; they are medium if there is a high volume of runoff managed and a low beneficial use of the runoff; and the benefits are considered as low if there is a low volume of runoff managed and a low beneficial use of the runoff.

24. What does “enhanced capacity” mean for the wastewater hybrid alternatives?

“Enhanced capacity” means to increase the capacity of the existing wastewater treatment plant so that it will meet the projected 2020 flows.

25. When defining the benefits for recycled water, did you consider the political aspect of connectability like the “toilet to tap” situation?

There are political risks associated with using recycled water to recharge the groundwater and there are the implementation risks with using recycled water for irrigation and industrial uses. We may build the recycled water distribution infrastructure, but some potential customers may not wish to connect to the system due to high retrofit costs and complications.

26. Is there any proposal to use the recycled water produced from the advanced treatment to be directly connected to the drinking water source water like a reservoir?

No. There is absolutely no proposed option to directly augment any drinking water supply with any type of recycled water of any quality. Also see response to question 20.

27. For hybrid alternative 3C, Tillman will be increased to 100 mgd capacity. Where is the consumption demand for recycled water that would warrant expanding Tillman to 100 mgd?

The response to this question in the workshop was that by 2020, the recycled water for alternative 3C would be used for groundwater recharge, irrigation and industrial uses, and to maintain the environmental benefits to the Los Angeles River. *In response to some Steering Group members concerns voiced at the workshop and existing City policy that precludes recommendation of any alternative that includes indirect potable reuse, the IRP will no longer consider the option of using the recycled water to recharge the groundwater.*

However, Tillman has the most potential due to the large recycled water pumping station and distribution pipeline already constructed with plenty of capacity to serve as the backbone of a large recycled water distribution system in the valley.

28. By groundwater recharge, do you mean using the recycled water to recharge the groundwater used for drinking water? If so, you will not find political support for the project.

The response given in the workshop was that groundwater recharge does mean recharging the groundwater that is used as a drinking water supply. The IRP is a 2020 planning study for which we need to look at all the options from a technical, engineering, and cost standpoint. In the DWP capital program, DWP is not pursuing a groundwater recharge project at all. If the City decided to go with an alternative like hybrid alternative 3C, DWP might change its position on groundwater recharge. As part of the IRP, a Recycled Water Master Plan will be developed which will determine the best scientific, technical, cost based alternatives. The Recycled Water Master Plan will also develop a back-up plan at a substantially higher cost that will connect more publicly acceptable users of recycled water like irrigation and industrial users. *In response to some Steering Group members concerns voiced at the workshop and existing City policy that precludes recommendation of any alternative that includes indirect potable reuse, the IRP will no longer consider the option of using the recycled water to recharge the groundwater.*

29. Was the alternative that was proposed in previous workshops to build a new sewer from the Tillman area to the Hyperion plant to avoid the costly discharge requirements of the Los Angeles River investigated, and if so what is the cost.

This was investigated. The City has to maintain a minimum flow of 52 MGD into the plant, which will net the 27 MGD needed to support the three waterbodies in the Sepulveda Basin, and the soft-bottom ecosystems in the river. This is a very minor decrease from the 64 MGD least-flow case assumed for the alternatives. Alternative 1 basically covers this request.

30. We should make the best recommendation without worrying about whether the City Council or the Mayor will endorse it. As long as we are technically correct and cost effective, then it will be up to the policy makers to decide if they want to reject our recommendation based on hysteria.

No response required.

31. This planning process will get all of these ideas into the alternatives so that they can be analysis in the Environmental Impact Report (EIR), so any concerns about groundwater recharge issues will be addressed in the EIR process.

Correct. The range of four alternatives, to advance to the EIR process, will comply with the basic IRP principles, but they will have different options and ideas.

32. The East Valley Water Recycling Project went through an extensive environmental process, but it was killed by the anti “Toilet-to-Tap” constituency, so if we don’t consider public acceptance when making our recommendation, the IRP may suffer the same fate.

No response required.

33. Since the IRP is a 20-year plan, and since public sentiment changes over time, we need to go with what is scientifically sound and best for our future, and it is up to us to help change public and political perception to make it feasible.

No response required.

34. For the Dry Runoff Cost vs. Benefit chart, why are the Hybrid 1B, 2B and 3B alternatives not possible second choices?

The Hybrid 1B, 2B and 3B alternatives are “clear losers” to the Hybrid 1C alternative because Hybrid 1C has a higher benefit for same cost. An alternative that has fewer benefits over an alternative with more benefits (if they have the same costs) would never be selected.

35. Is there documentation about what the recycled water reuse will be for the four proposed alternatives?

In the handout package, there is a report called the “Integrated Alternatives Report Card Summary” that gives the amount of recycled water and other statistics of all 12 preliminary integrated alternatives and the 9 hybrid alternatives.

36. What was the LR1 alternative?

The LR1 alternative was the low risk alternative in terms of the regulatory perspective, so it included a lot of treatment plants and diversions. It was basically a treatment and discharge alternative with respect to runoff management.

37. Were the amount of public lands enhanced taken into consideration when ranking the benefits of runoff managed?

No. The benefits for the dry and wet weather runoff were defined on the basis of volume of runoff managed and volume of runoff beneficially used. Therefore, the hybrid alternatives that have a high volume of runoff managed and high volume of runoff beneficially used (like the C hybrids) were ranked higher than the alternatives that had less volume of runoff beneficially used (like the B hybrids) even though the B hybrids have more acreage of public lands enhanced.

38. For the Hybrid 1 series, is there less opportunity to recycle the water because the cost to pump it back upstream is too high?

Yes. The Hybrid 1 series has a limit to the amount of recycled water that can be beneficially used due to the high pumping and infrastructure costs, but Hybrid 1C has other benefits like a lower cost to expand Hyperion and it still has the high volume of runoff managed and beneficially used.

39. Does the Hybrid 1 series consider the cost of sewer lines necessary to convey the wastewater to the Hyperion Treatment Plant?

Yes. Some of the sewers necessary to convey the wastewater to the Hyperion plant are currently under construction through the Downtown and South Los Angeles areas of the City. These are the so-called East Central Interceptor Sewer and the North East Interceptor Sewer Phase I. The cost for the future sewers necessary to convey the flow to Hyperion has been included in the Hybrid analysis.

40. If we define the benefit for runoff management on the basis of more distributed as a high benefit, would the ranking of the alternatives change and is it relevant?

The more benefits to the community associated from more distributed runoff management options is relevant and is something that can be looked at. If the distribution of projects (or the enhancement of public lands) is factored into the rankings, the final top four alternatives will probably not change, but the ranking between the final 4 may change.

41. The IRP has been very good with adaptive management. We're really looking for an alternative that maximizes both runoff management benefits.

We will add the enhancement of public lands (more distributed) as a high benefit to see if the final four alternatives are different.

42. How did you calculate the additional monthly cost of the alternatives based on single-family residences?

We took the capital cost and the operation and maintenance cost share in current dollars of each alternative and divided it by the projected number of single-family residences in 2020. The single-family residence is just one of four groups that pay a Sewer Service Charge. The other three groups include multifamily residences, industry, and non-industry business. We have assumed that the share of the cost will stay the same through 2020 for each group. The single-family residence cost is the most representative due to the significant variations in the other three groups.

43. Why does the integrated alternative WR3A have a high cost relative to the hybrid alternatives?

The High Use of Water Resources integrated alternative 3A (WR3A) includes a new wastewater treatment plant, and for the runoff management, it includes the use of cisterns for all new and remodeled single-family homes. These two components of WR3A increase the costs considerably. The C water management level hybrid alternatives manage similar amounts of runoff, but they do it through more regional, larger projects like the Sun Valley Watershed project, which is more cost-effective for the same amount of runoff managed.

44. I would like to see us push the envelope with one of the final four alternatives by recycling 100% of the water (using reverse osmosis treatment and discharging it directly to the drinking water reservoirs).

Please see the responses to questions 27 and 28.

- 45. We need time to go over the final four proposed alternatives before we can make a decision to approve these four alternatives. We should also inform the public through the newspapers about these four proposed alternatives so that we can get some feedback from the communities and businesses.**

We are gathering feedback about the 4 proposed alternatives from the IRP stakeholders. The feedback will be used to finalize the 4 proposed alternatives, and the final 4 proposed alternatives will be carried forward to the environmental documentation phase where the public will have ample opportunity to review the alternatives and provide feedback. Through the Environmental documentation phase of the IRP, the preferred alternatives will emerge.

- 46. Giving us (Steering Group) more time to study whether or not we should move forward with the four proposed alternatives is a good suggestion, but going to the press with these alternatives at this time will create chaos. The press will only narrowly and inaccurately characterize these alternatives, and people who haven't had the background like we've received will have a reactionary response to the alternatives and start advocating for something different.**

We are not asking you to vote on whether the four proposed alternatives should be carried forward or not. The IRP stakeholder process is an effort to work with you (Steering Group) to get your feedback as we develop the alternatives. The final four proposed alternatives will move to the Environmental Impact Report (EIR) process which is a full public participation process. The IRP is a total transparent process. We have been outreaching to the communities to inform them about the process and to get their feedback every step of the way.

- 47. It seems as if hybrid 3C should give us the most return for our money, but I don't see this. Can you give us a ranking of what the effectiveness of each of these criteria were?**

The slides that show the benefits vs. the cost (slides 18-29) provide this information.

- 48. Because the 4 proposed alternatives only do groundwater recharge in the East Valley where there is no groundwater contamination, it appears that groundwater pollution clean up is not part of the four alternatives?**

Groundwater contamination clean up is not being considered in the IRP, but the Department of Water and Power is committed to maximizing the groundwater resources in the City. DWP is planning a major effort to study the groundwater contamination issue and to develop solutions to maximize the groundwater available to the City for water supply.

- 49. For the 4 proposed alternatives, what (if any) of the desired solutions are not in the mix. Example: cisterns for schools and government are part of the 4 alternatives, but cisterns for private homes are not. Will the options for the use of cisterns at the single-family residence level be available in the EIR?**

As part of all 4 proposed alternatives, we will have a list of Leadership Projects (options that appear promising but are not yet fully developed) that we will recommend the City implement in addition to the options included in each alternative. We are asking for your help to identify these leadership projects.

- 50. I think these 4 alternatives have enough variables that we can move forward. The important aspects that we need to emphasize to the media is that we are leaning toward lower cost projects and that we are not totally relying on Toilet-to-Tap.**

No response required.

- 51. Instead of these charts, can you give us a 4 or 5-page summary of what each alternative means in practical terms and how the cost will be shared by the ratepayers? We need this information to outreach to the organizations we represent.**

In the package containing this Feedback Report, we have enclosed a two page IRP information sheet that you can use to outreach to your own organizations. At the next workshop, we will also provide you with more detailed financial information that will explain who/how we pay for the alternatives.

- 52. With the current controversy over the recent DWP proposed rate hike, we need to be very up front with the Neighborhood Councils about the potential rate hikes that the alternatives may have and why we need it.**

No response required.

- 53. We need to capture as much wet weather runoff as we can through dams and storage tanks.**

No response required.

- 54. What are the basic ingredients of smart irrigation?**

There are two types. One measures the soil moisture content to determine how much watering is needed, and the other type is linked to the weather forecast satellite feed that automatically programs the sprinkler system.

- 55. Smart irrigation and gray water systems have already been demonstrated so they don't need to have a demonstration project?**

For smart irrigation systems, the demonstration project would be for retrofitting single-family residences and other small-scale uses which have not been demonstrated yet in the City. We are looking at offering incentives for owners to install gray water systems, but for gray water systems to be successful, they have to be maintained correctly.

- 56. You should use the term demonstration projects, not leadership projects.**

No response required.

- 57. Does the cost reported for the projects include debt service, and was it divided by the number of metered ratepayers?**

In the preliminary financial analysis, we estimated the capital costs, and we assumed that the costs would be financed using the City's historical finance rate. We then took these costs and added operation and maintenance costs and then divided it by the projected number of metered properties. In the detailed financial analysis, we will identify the sources of funding.

- 58. We need to refine the language describing the leadership projects which implies that they are expendable, like the word "visionary."**

No response required.