

Attachment B

City of Los Angeles IRP Steering Group Workshop No. 4 May 22, 2003

FEEDBACK REPORT

GENERAL

1. SCAG process – issues with their approach

Representatives from the Southern California Association of Governments (SCAG) are participating in the IRP on the Management Advisory Committee (MAC) and are invited to attend all of the IRP stakeholder workshops.

2. Planning & Rec. & Parks participation – partnering and integration is mandatory

Herman Van Buren from the City Planning Department addressed the remark stating that the City Planning Department is involved with the IRP.

3. All sewer O & M fees collected should go for the O & M of sewers and not to divert money allocated from the general fund like the trash pick-up fees.

The wastewater program is not funded from the City's general fund.

4. Use IRP process to shape bonds for Stormwater funding

The IRP will look at the possibility of bonds to fund the IRP recommendations including stormwater options.

5. Need to include the IPWP options in the IRP considerations

We are going to include all options introduced in Phase I of the IRP (the IPWP) in phase II, but they will be introduced in more detail.

OUTREACH AND EDUCATION ACTIVITIES

1. Provide press release on Steering Group workshops – publish minutes.

It is not feasible at this time to place Steering Group workshop minutes in the newspapers. However, we are investigating placing an ad in the newspapers to promote IRP and advertise the Steering and the Advisory groups meeting schedules.

Every effort is made to discuss Steering Group workshop in the IRP newsletter that is issued every six months and on any IRP press releases that may be issued, from time to time. We have not issued press releases specifically for the IRP workshops, but that doesn't mean it could not be considered in the future.

2. Increase public awareness of Japanese Garden at TWRP.

Public events are held at the Tillman Water Reclamation Plant (TWRP) from time to time as necessary. Some neighborhood councils and the Wildlife Committee meets there. IRP Steering Group meetings are not held there because the stakeholders did not show preference for it during the previous stakeholder survey on meeting location. In 2001, 20,000 visitors enjoyed the Japanese Garden and 5,000 students participated in reclaimed

water educational activities. In addition, the Garden was the venue for 70 weddings and receptions, 50 community meetings, and 30 "Hollywood" film shoots.

The Japanese Garden is designed to showcase the multi-benefits of recycled water and that goal can certainly be enhanced by efforts to increase public awareness of the Japanese Garden. The City is interested in such efforts and the garden's docent and volunteer program now has over 75 members. They guide educational tours of the garden where they show visitors the water reclamation process from an onsite plant-viewing tower. The Garden's education program is targeted for students in intermediate grades through college, and adults. The tours of the Tillman Water Reclamation Plant's processes have just been added to the tour program. This was started to provide a more in-depth education about reclamation. This new program gives an overview for water use, water reclamation and ultimately water reuse. For the school educational program for younger students, we have developed the Wally Waterdrop workbook to explain water reclamation and Japanese symbolism. The latest public service addition has been the creation of two websites. One is directly to the Japanese Garden and the second is through the Bureau home page. Both sites include information about water reclamation, volunteer opportunities, special events at the garden, and general tour information.

3. Include IRP information in utility bill.

The IRP will investigate the possibility of a DWP bill message that promote IRP and attract more public participation, instead of a bill insert. The message could be " the City is looking at the need for future facilities that may impact your neighborhoods, want to be heard, call -----" or another similar message.

4. Put IRP link into other interest group website links and vice versa.

The IRP and BOS websites are already linked to other groups and we look to increase or extend the links to even more groups. We will prepare letters to all stakeholder groups requesting them to add IRP and the BOS websites to their own.

5. Include LA Times/other publications regarding getting the word out.

We will send out press releases to community newspapers to get the word out about IRP as well as the Steering and Advisory group meetings.

6. Notify Steering Group of next Advisory Group meeting so can add to their website.

We will continue to notify the Steering Group members of the Advisory Group meetings. We will evaluate providing Steering Group members with a brief media advisory to add to their websites to announce the Advisory Group meeting information.

7. Need to get the word out about the IRP– need clear, easily-understood materials

We are looking into ways we can increase the public interest in the IRP like possibly advertising on Channel 35 to reach the Spanish speaking community. TreePeople will also be helping to create a message to outreach to the public.

WASTEWATER “GAP” ANALYSIS

1. What is the equivalent storm event if assuming 10/24 storm uniformly over entire area?

No studies have been done specifically to assess the frequency of a 10-year storm over the entire Los Angeles region. The intensities and durations of a storm vary across the wide expanse of the City during any one storm, and no two storms are the same. The design storm used by the City is actually a composite storm that was developed considering storm duration/intensities at three different locations in the City – the Valley, the downtown area, and along the coast. The impacts on the conveyance system from the 10-year design storm were determined from the hydraulic model (the SAM model) and these results were compared to the modeled impact results of storms of record. The design storm was comparable to three storms of record that occurred during the 40-year period which suggests that it is close to a 10-year recurrent storm. Therefore, the 10-year design storm represents a conservative estimate of the rainfall over the entire City.

2. How is TITP impacted with 2020 flow?

We project that the Terminal Island Treatment Plant (TITP) service area will not have capacity concerns in 2020. The plant and sewer system in the TITP service area is adequate to handle projected 2020 flows.

3. Does solids return to HTP affect capacity?

The solids returned to the sewer system from the upstream treatment plants is only about 1 or 2 percent of the total capacity of the Hyperion Treatment Plant (HTP), and the solids returned to the systems is considered in the projected flow contributory to HTP.

4. For the graphic in the slide “Estimated impacts of 2020 wastewater Flows on the existing wastewater collection system” (slide 20), what % of the total system shown will be overloaded (>50% full) in 2020?

The percent of sewers overloaded (>50%) on slide 20 and on the attached graph do not represent the percent of additional sewer miles needed to provide relief in 2020. Providing relief in one area can address “overloads” in several areas. Therefore, the length of additional sewers needed to provide relief will be much less than what is shown on the slide. The information about the length of additional sewers needed is not available at this time, but will be available at a later date.

5. Will NOS be rehabilitated after ECIS?

When the East Central Interceptor Sewer (ECIS) is online, the North Outfall Sewer (NOS) will be rehabilitated and will just be used primarily to convey local flow.

6. What’s a force main?

Most of the City has terrain that allows the use of gravity to convey the sewer flow, but in some flat areas of the City, like the coastal plain areas, there is not enough slope of the land to convey the flow by gravity alone. In these flat areas, pumps are used to increase the head (elevation) enough to convey the wastewater to the plant or to another higher sewer. A force main refers to the sewers that flow under pressure out of the pump stations.

7. What % of wastewater flow is I/I?

The percent of infiltration/Inflow (I/I) to the wastewater system depends on weather conditions. In wet weather conditions, about 50% of the wastewater flow comes from stormwater runoff that enters into the wastewater sewers. The sewers are designed to reserve fifty percent of the total capacity for stormwater I/I. During dry weather

conditions, infiltration/inflow (I/I) is comprised primarily of groundwater infiltration (GWI). During drier seasons, groundwater levels depress and GWI is lower. During a series of wet seasons, when the soil gets saturated and groundwater levels increase, the GWI is higher. The percentage of GWI that would be present under average conditions varies depending on the exact trunk sewer under consideration. However, for the entire Hyperion Service Area (HSA), GWI would represent about 6 percent under average conditions, and up to 20 percent during wet seasonal conditions. For the Terminal Island Service Area (TISA), GWI would represent around 8 percent under average conditions and up to 25 percent during wet seasonal conditions.

Many cities have a ratio of wet weather wastewater flow to dry weather wastewater flow of 40. The City of Los Angeles' wet weather wastewater flow to dry weather wastewater flow ratio is only 2, but we are still looking at ways of reducing I/I. In the Eagle Rock area, the City has placed 1,100 maintenance hole inner covers to reduce I/I. Also the City has identified 456 of the highest volume contributors from illegal connections of their stormwater runoff to the wastewater sewers and has obtained 90% compliance in removing the connection.

8. If I/I is substantial, is the City investigating the multiple benefit of road reconstruction projects to ensure proper conveyance of runoff which would reduce I/I?

The stormwater inflow to the wastewater sewer system attributable to road surface conditions is minimal, and it would not be cost effective to reconstruct a road to eliminate the inflow. In some instances, it may be cost effective to seal a maintenance hole in a low lying area of the street to eliminate inflow from the pick hole and around the rim of the maintenance hole. We have installed some inner covers in some areas of the City to prevent inflow from maintenance holes. Also, our crews plug the pick hole as part of our inspection and maintenance program.

9. How frequently does the City review the design criteria of 10 year/24 hour storm in terms of risk assessment?

The City does not have a set frequency to review the design criteria of using a 10-year/24 hour storm for determining peak wet weather flow for the wastewater systems. The design criteria is discussed and reviewed on an as needed basis, including for the IRP process.

10. Will you consider LA County facilities in relieving wastewater capacity needs?

The IRP will focus on options that will use City facilities to address capacity needs but will consider the options of using county facilities.

11. Coordinate with the Planning Department to ensure that runoff coefficient used for single family lots is compatible with the wastewater sewer capacity reserved for stormwater runoff.

The current paving limits for single-family residences requires that no more than 50% of the front yard may be paved. The wastewater collection system is separate from the stormwater collection system. The stormwater collection system is designed to convey all surface runoff from properties, streets, parks, etc. The main purpose of the wastewater collection systems is to convey wastewater generated in your home (shower, sinks, toilets, dishwashers, and washing machines) to the treatment plants. The wastewater

collection system only receives a small portion of the total stormwater runoff, the portion that accidentally gets into the system through pipe defects or illegal connections (I/I).

12. Color slide for collection system – show reference points.

Attached is a colored graph titled “Wastewater System Flow and Capacity Gaps in Year 2020” which is a replacement graph for the graph shown on slide 20 of the workshop presentation slides, “Estimated impacts of 2020 wastewater Flows on the existing wastewater collection system.” Major freeways were added to the graph for reference points.

13. Does collection system map identify localized problem areas?

The slides only show the large interceptor sewers studied in the IRP. The smaller collector sewers are being addressed in more detailed studies than the IRP.

14. Why/How does stormwater get into sewer system

Wastewater sewers are not designed to be tight. There are joins and maintenance holes (the City has 140,000 maintenance holes) where stormwater runoff and groundwater can inflow and infiltrate (I/I) into the wastewater sewer system. The cost of eliminating the I/I completely is not cost effective. The City conducted a study in 1992 to find out if it is more cost effective to reduce I/I or to convey it and treat it. The results of the study showed that for most areas that it is more cost effective to convey and treat the I/I instead of taking measures to reduce I/I. Also, the results showed that most I/I come from private property sewers where the property owners are responsible for the repairs.

15. Can we get a copy of 1992 I/I Study?

The 1992 Infiltration/Inflow Study is comprised of several volumes, and it would be very costly to reproduce a copy for all Steering Group members. Also, we do not have an electronic copy of the Study available. If you would like to view the document, we will provide you with access to the report at our Bureau of Sanitation offices located at 2714 Media Center Drive. To make an appointment to view the I/I Study, please contact Amy Jones at (323) 342-6233 / aljones@san.lacity.org.

CONSIDERING OUR WASTEWATER OPTIONS

1. How big are the storage tanks going to be?

The storage tanks will be in the neighborhood of 20-60 million gallons.

2. What do the storage tanks look like?

A storage tank can be circular or rectangular tanks, or even a big pipe. These are typically buried and cannot be seen above ground.

3. What % of water used goes to wastewater?

All water from your showers, sinks, toilets, dishwashers, and washing machines goes to the wastewater sewers and it is about 2/3 of your typical water usage.

4. What % of potential gray water currently goes to sewer?

Gray water is water from the showers and washing machines that can be stored and reused to water lawns and flush toilets. The wastewater from the shower is the largest source of water to the wastewater system.

5. Can the use of gray water systems represent an effective wastewater flow reduction to merit further economical considerations?

This is an important option which will be considered in the IRP.

6. Can you share information that demonstrates how much night capacity is available at each plant?

Graphs showing the hourly average flow during a typical day (June 13, 2003) at each treatment plant are attached.

7. How does ammonia management impact TWRP planning?

We are currently retrofitting the existing facilities for denitrification. The IRP is assuming derating plants due to planned nitrification/ denitrification projects.

8. How much do these options cost?

We are just in the conceptual stage at this point. There is not enough detailed information at this time to produce accurate cost estimates. The cost for these options will be developed and reported in future workshops.

9. Can you build a storage tank only at one plant and not at another plant?

Yes, building a storage tank at one plant may help relieve the stress on another plant, eliminating the need for storage at the other plant. Also, we may mix and match the different options at each plant.

10. Explain why the storage option for the LAGWRP shows building a 15 million gallon tank and a 5 million gallon tank. Isn't it cheaper to build one 20 million gallon tank?

The two storage tanks shown for the Los Angeles/Glendale Water Reclamation Plant (LAGWRP) storage options (Options 1B & 2B) are for two separate purposes. One is for storage of wastewater before it is treated and the other is for storage of recycled water after the treatment process.

11. What's build-out capacity for TWRP?

The build-out capacity for the Tillman Water Reclamation Plant (TWRP) is 200 million gallons per day.

12. Can wastewater treatment plants generate power?

The discharge point for the wastewater treatment plants is generally too low to generate electric power. The solids treatment process at the Hyperion Treatment Plant and at the Terminal Island Treatment Plant does generate gases that can be used to generate electric power.

13. Is lake at LAGWRP functional? – Can we use space?

The lake at the Los Angeles Glendale Water Reclamation Plant (LAGWRP) is not used for any treatment process. It only has aesthetic value.

14. Provide color copies of site plant options.

Providing color copies of slides would be very expensive (about \$1 per page). It would cost about \$3,250 to provide all 116 Steering Group members with color copies of the

slide presentation, and we do not have the budget available for this significant expense. However, we will provide an electronic copy of the colored slide presentation to any Steering Group member who requests it.

15. Can we develop designer bacteria to improve efficiency?

In the future, the use of designer bacteria may be cost effective, but currently no designer bacteria has been shown to have better results than the natural occurring bacteria we use today, which are some of the oldest bacteria on earth.

16. Is the active recycled reuse options being considered?

Yes, the Department of Water and Power is partnering with the Bureau of Sanitation in the IRP for primarily the issues regarding the recycled water service function aspect of the IRP. We will be presenting the recycled water options in the next workshop.

17. Are we considering where growth is going to occur in options?

Yes, state and local laws require us to use population growth projections developed by the Southern California Association of Governments (SCAG). The population projections are detailed enough to show exactly where the growth will occur and takes into account the land use criteria and growth patterns.

18. How does SCAG generate its estimates?

The Southern California Association of Governments (SCAG) is comprised of all city and county government agencies throughout the six county region. The process for the growth projections is a very detailed technical process which looks at trends of growth occurring in each area and alternative trends of growth with interaction between all agencies.

19. Does SCAG act to control population growth?

No, population control is not part of the mission of SCAG.

20. How can we get involved in our recycling options?

We will be presenting the recycled water options in the next workshop.

21. Do you have reuse options planned for HTP? Will HTP be partnering with West Basin to produce more recycled water?

There are land space limitations at the Hyperion Treatment Plant (HTP) that prohibits upgrades to the recycled water treatment process. The City currently has a deal with The West Basin Water Recycling Facility where they process 30 million gallons a day of the secondary effluent from the Hyperion Treatment Plant for recycled water. In the future the West Basin Water Recycling Facility may recycle as much as 70 million gallons a day of Hyperion's effluent.

22. Can you consider recycled water for power plant cooling?

We will be presenting the recycled water options in the next workshop.

23. For the new water reclamation facility without LA River discharge, will all effluent from new plants be recycled?

Yes.

25. For the new water reclamation facility with LA River discharge, can the discharge be used with some of the river revitalization proposals?

Yes, as part of the IRP, we will be working closely with the City Council's Los Angeles River Ad Hoc Committee to look at the plans for Los Angeles River revitalization. Some of the questions we are currently looking at is what is the optimum level of water that is needed to sustain the river habitat and what is the optimum level of water needed for any river revitalization plans.

26. Can we keep a new plant simple and modular?

Yes, we can continue to build facilities with the modular design so that we only have to build the portion needed. Also, membrane technology is very compatible with modular design. As the technology changes, we can add the new technology to the new portion without having to replace the old technology in the entire plant.

27. Are there opportunities for interagency cooperation in siting new wastewater treatment facilities with other public facilities?

Yes, the option of multiuse/multi-benefit facilities is being considered in the IRP.

28. Are we considering building runoff?

Yes, runoff options will be considered in future workshops.

29. Maximize decentralization

The IRP will look at decentralized options.