



Pure Water North City Phase 1 Construction Projects  
University City Working Group Meeting #4 Summary

North City Water Reclamation Plant  
Tuesday, Aug. 21, 2018, 4:30 - 8 p.m.

*This document is not intended to capture verbatim comments from the meeting or function as meeting minutes. It is a summary of the comments and questions posed by the Working Group members and the answers provided by City staff and consultants. The questions and answers are unattributed.*

**Working Group Members Present**

Brenda Anderson, Resident  
William "Bill" Beck, Renaissance La Jolla HOA  
Barry Bernstein, University City (UC) Community Association  
Bob Brown, Resident  
Ruth DeSantis, UC Community Foundation  
Merle Langston, UC Community Association  
Rita Lim Wilby, Resident, Chemist, Business Owner  
Jerry Malamud, Resident  
Pia Mantovani-Sud, Resident  
Amy Murad, Resident  
Bob Brown, Resident  
Katie Rodolico, Resident  
Tama Snow, Engineer

**Working Group Members Absent**

Dan Harvey, Organic Chemist  
Andie Hosch, UC Planning Group

**Project Team Members Present**

Brent Eidson, Public Utilities Department  
John Helminski, Public Utilities Department  
Stephen Lindsay, Public Works Department  
Joe Long, AECOM  
Sean McCarty, Consultant, Public Utilities Department  
Lewis Michaelson, Facilitator, Katz & Associates  
Tiffany Ngo, Katz & Associates  
Victor Occiano, Brown & Caldwell  
Alan Shapiro, AECOM  
Shannon Slaughter, Katz & Associates

## Other Attendees

Bridger Langfur, Council District 1

## Public Members from Sign-in Sheet

Exavier Aguilar, La Salle Solutions

Eleanor Beck, Vista La Jolla

Tom Crane

Kathryn Harvey, Villas at University Park

Deborah Knight, Friends of Rose Canyon

Dennis La Salle, La Salle Solutions

Judie Malamud, Vista La Jolla

Matt McGreevy, Alexandria RE

Jason Moorhead, Alexandra RE

Chris Nielsen, UC Planning Group

Steven Weinreich, La Salle Solutions

Izear Williams, Alexandria RE

## Welcome and Introduction

Lewis Michaelson welcomed the University City Working Group (WG) to the fourth meeting and went over a short recap of the process so far, followed by a description of the creation of the WG Construction Recommendation Matrix, what it is comprised of, and how it will be discussed. The matrix is comprised of the 11 construction topics and lists the suggestions and recommendations the WG gave to the City to consider, review and analyze, along with responses from the City and a status update for each suggestion. He then went over introductions and the agenda. He also informed WG Members that a fifth and sixth meeting will be held on a date and at a location to be determined in the future.

WG members received a packet of Meeting 4 materials for their binders including the meeting agenda and a copy of the Construction Recommendation Matrix.

To view project and meeting materials, including new binder contents, visit the Pure Water San Diego website at [www.purewatersd.org/Phase1](http://www.purewatersd.org/Phase1).

The following are comments or questions from WG members:

- **WG Member: You mentioned the fifth meeting, but I thought we discussed setting up additional meetings once the project started. For example, maybe we should meet in March if the project is starting in April, and so on.**
  - o Facilitator: Yes, what I meant by the fifth and sixth meetings is that we will reconvene with just this group and go over the bid specs and the updated matrix.
  - o Project Team: We've already committed to the next two meetings, but there has also been talk about more meetings, whether it is this group or an expanded version of it, or offshoots with other meetings, but we'll put that in the community outreach plan and when we have figured that out, we'll bring that information back. The commitment is firm that we'll come and talk to

the community and you can count on us and the public outreach team to make that happen.

- **WG Member: I don't know if this has been covered, but if something happened, what is the financial liability?**
  - o Facilitator: That is not the purpose of this group, but there are policies that cover that, and you can speak with John Helminski about it during the dinner break.

### Follow Up Items

L. Michaelson and the City staff addressed the follow up items from the previous meeting, including giving an update on the AVAR vent tour Sean McCarty lead, questions about detection of loss, presentation of the map of nominal working days for a visual aid in understanding a construction schedule, and the introduction of Victor Occiano, a civil and chemical engineer from Brown & Caldwell, with 30 years of experience in the wastewater industry, to talk about the chemistry of the components inside the pipe.

The following are comments and questions from WG members:

#### *Tour*

- **WG Member: Does the vent structure have a hook on it?**
  - o Project Team: No, it does not.
  - o **WG Member: It has a cap that people could potentially vandalize.**
  - o **WG Member: Could we put shrubs or something around it?**
  - o Project Team: It depends on the location. It is about the size of a fire hydrant, and if there is landscaping, we could put it there, so it isn't in plain sight.

#### *Detection*

- **WG Member: Regarding my question about the accuracy and sensitivity of sensors, how do they detect if there is a leak?**
  - o Project Team: The meters notice when there is a difference of one tenth of one percent.
  - o **WG Member: One tenth of one percent? So if the pipeline is conveying 30 million gallons of sewage a day, and it were leaking less than that percentage, would the leak still be detected?**
  - o Facilitator: The question is if there was a small leak, under one tenth of a percent, would the system not detect it and not shut down.
  - o Project Team: If a leak isn't detected by the flow sensors, it will be detected by the pressure sensors. There are pressure gauges at manways and other locations along the route.
  - o **WG Member: I thought the pressure is only being measured at the ends of the pipeline.**
  - o Project Team: It is actually getting checked in multiple locations, there are pressure gauges at manways and other locations, including at each side of the tunnels, along the route.

- **WG Member: What is a manway?**
- Project Team: It is a vertical access point for inspection purposes. It is a vault, you can imagine it like you're putting plumbing pieces together, and it is bolted shut. They are located approximately every 3,000 feet apart.
- **WG Member: When that pressure change is noticed or it drops, is it automatic or a manual shut off?**
- Project Team: It is automatic, it is programmed into the system.

### *Working Hours*

- **WG Member: Are we going to be discussing the working hours for the Genesee area?**
  - Project Team: We are still working on it, we have to meet and talk through it with the City Engineer and the construction management team. We don't have an answer at this point but we are hoping by the fifth meeting we will.
  - Facilitator: We are going to go through that whole list very logically and deliberately later.

### *Chemistry*

- **WG Member: How long is the concrete in the pipes expected to last, factoring in the results of oxidation of hydrogen sulfate reacting with pure oxygen?**
  - Project Team: The generation of sulfuric acid happens through a biochemical process. Hydrogen sulfide (H<sub>2</sub>S) would come out of solution, and bacteria that exists in the pipe would then take that oxygen/H<sub>2</sub>S and create sulfuric acid.
  - **WG Member: You said H<sub>2</sub>S is a gas but it is soluble. Even if there was no air/liquid interface, the reaction could still take place, and because it's under high pressure, that accelerates the reaction.**
  - Project Team: The reaction between sulfide and oxygen creates sulfate and some energy and carbon dioxide (CO<sub>2</sub>), not sulfuric acid. That is generated typically in a gravity sewer with a liquid phase that has a gas phase above it. What happens is the H<sub>2</sub>S comes out of solution. We have oxygen in the head space (the gas space above the liquid) and then the bacteria converts that into sulfuric acid, and that is what creates the corrosion at the top at the crown and sometimes at the side.
  - Facilitator: But not anywhere where its touching water?
  - Project Team: Yes. Because where you generate the sulfides is in the slime layer, and as sulfate goes into the slime layer it creates sulfide, but it stays in solution unless it is at a certain pH. It can come out of solution at certain pH levels and that's the reason why we control the discharge of industrial waste because we don't want acidic waste.
  - **WG Member: You're not adding anything to moderate the acidity?**
  - Project Team: We are adding the high-purity oxygen. You're oxygenating your sulfates. We keep the wastewater aerobic.

- **WG Member: You're not doing anything to control the acidity. I didn't hear of anything, calcium, carbonate, etc., things you add to buffer it and add alkalinity.**
  - Project Team: Wastewater actually has a lot of alkalinity, it neutralizes a lot of the acids. We don't want the pH of the wastewater to go down.
  - Facilitator: Have you estimated what the pH will be for this flow?
  - Project Team: Typically it's around six to seven or so. We've been tracking wastewater coming into the plant and we track the pH. The high purity oxygen prevents the acids from occurring and controls the pH, and essentially pretreats the wastewater.
  - **WG Member: How will you control the pH along the pipeline?**
  - Project Team: As I mentioned its aerobic and H<sub>2</sub>S is an acidic gas, so it'll start to drop the pH. We've seen that in wastewater pipelines around San Diego and we'll monitor that along the line.
  - **WG Member: You haven't actually answered the question of how you're going to keep it from going acidic? H<sub>2</sub>S is an acidic gas, sulfuric acid is also acidic. So how are you going to buffer it? You said sewage has alkalinity but that depends on the input, and if you don't monitor.**
  - Project Team: We do monitor.
  - **WG Member: I listened to the question and he did answer the question, my background is chemical engineering, and it sounds like what V. Occiano is saying is his biggest concern is that an industrial effluent enter unpredictably and cause a surprise amount of acid. The biological systems in the normal water is not a big deal, they can control the pH by adding oxygen and avoiding anaerobic biological activity. If you have aerobic biological activity, it is not as acidic so that's how they control the pH. They control the pH by adding oxygen because they're affecting the bugs that are in the sewage.**
  - Project Team: That is correct, we need the organisms in the water to operate. We're not going to accept wastewater that would kill the bugs at the plant. We're adding high-purity oxygen to keep everything aerobic.
  - **WG Member: I don't believe it. There is everything from nitrates to nitrate to oxygen and it becomes more acidic.**
  - Project Team: We actually measure pH throughout the process and can provide you with that information.
  - **WG Member: My concern is the concrete in the pipeline from Morena to here. What are you going to do about corrosion controls for the concrete-lined pipe from Morena to University City?**
  - Project Team: I've looked at the sulfate levels and we're well below the level that would impact concrete.
  - **WG Member: Will the oxygenation under pressure accelerate that?**
  - Project Team: We haven't seen that in pipelines before. There are force mains throughout the system and we haven't seen that. We've run tests in Sorrento Valley.
- **WG Member: Can you categorically state that you have measured sulfite levels at typical input rates and will you know if there is too much H<sub>2</sub>S creating too**

**much acid in pipeline, and you only see corrosion at the transition from a liquid phase to gas phase?**

- Project Team: We'll know at the screening facility if the levels aren't typical because we would see record amounts of H<sub>2</sub>S.
  - **WG Member: But that means the gas is in the liquid state, so how are you controlling it?**
  - Project Team: At the Morena Pump Station, we have H<sub>2</sub>S sensors, and we would see any spikes there first.
  - **WG Member: They're continually monitoring the H<sub>2</sub>S. There are safety and odor issues as well that require them to control this stuff.**
  - Facilitator: If you detected a spike in the H<sub>2</sub>S before it entered the pipe, what would you do?
  - Project Team: The last thing this plant wants to do is kill its bugs (microbes) because then they have to start all over. So it would stop pumping and then the wastewater would move to the Point Loma Wastewater Treatment Plant.
  - **WG Member: And you can do that legally?**
  - Project Team: Yes, we can.
- **WG Member: You said there is an air release?**
- Project Team: Everything has to be scrubbed at the Morena Pump Station. It won't smell, it goes through an air scrubber at the Morena Pump Station Site that is reviewed and approved by the San Diego County Air Pollution Control District.
- **WG Member: If there is a spike in H<sub>2</sub>S levels, what are the mechanism processes and triggers, so you don't pump that wastewater?**
- Project Team: We have a digital control system and control centers that alert people with alarms. The alarm triggers a decision by the operator, and the operator wouldn't want to pump wastewater that would kill the bugs at the plant. Someone is working 24/7, and operators have been certified by the State of California and have years of experience.
  - **WG Member: Is there one operator there or two?**
  - Project Team: There is always an operator, 24/7.
  - Facilitator: I think a tour might be a good idea for people who want to see and understand how the wastewater system works.
  - **WG Member: Yes, we would be interested in that.**
- **WG Member: Can we have a categorical statement that the acidity of the liquid in the pipe is not going to rise to the level of corroding the concrete as a result of any chemical processes?**
- Project Team: Yes. The pipe flows full.
- **WG Member: When you talk about bugs, is that microbes?**
- Project Team: Yes, people call them sludge bugs. They eat the organics.
- **WG Member: I have a follow-up question, when the criteria would cause you to divert to Point Loma, would it be legal?**

- Project Team: It is legal, we have a permit at Point Loma that allows us a certain amount of gallons per day, currently we have a 100 million gallon a day buffer with that amount.
- **WG Member: Isn't that expiring? I thought the federal government said that was done.**
- Project Team: That's not done. We can get waivers into the future indefinitely. Our most recent permit was approved in October 2017. All wastewater facilities have to renew their permitting every five years.
- Project Team: Rita and Victor, can we suggest a follow-up meeting and further discussion?
- **WG Member: I would be interested in that.**

#### *Contact Information*

- **WG Member: We don't have each other's contact information. Could that be provided?**
  - Facilitator: I have to ask one question. Does anyone here object having their contact information shared? If no one objects we aren't invading anyone's privacy. We need to see, does anyone object?
  - Facilitator: No one objects.

#### **Review of Working Group Matrix of Recommendations & City Responses**

S. McCarty introduced the next topic of the meeting, going over the Construction Recommendation matrix, with suggestions, responses to suggestions and the status. The status is color coded: green means that the City is adopting the suggestion into the specifications or the community outreach plan, yellow means an item the City is still evaluating, and blue means an item the City is not incorporating. He then went through the suggestions and the responses. Steve Lindsay went over the suggestions that dealt with outreach specifically and responded to them. He emphasized the importance of the community outreach plan and brought up that the project team will be bringing it back for the WG to review when it is completed.

The following are comments and questions from WG members:

- Project Team: One of the suggestions was to post directly to Nextdoor. Does everyone understand that we can only post directly? We can't see what is posted or respond to any comments or questions. Because of that limitation, we had it coded for evaluation because we were looking for feedback.
- **WG Members: That is fine, we are okay with that.**
- Project Team: Okay, thank you. We will incorporate it into the community outreach plan. We will keep the lines of communication open throughout.
- Project Team: Throughout, we are saying these suggestions will inform the community outreach plan. It is a very important document and we'll bring it back for one of the future meetings to specifically address UC. The most important thing we'll put out during construction will be the three-week look ahead, which will be provided, and it will be helpful to know where to send that. We're incorporating the feasible ideas from all groups into this plan.

- Project Team: We anticipate that all design specifications and drafts will be done in October and we will schedule the next meeting shortly after that, probably November or December. The contracts are slated to be advertised sometime in January. We'd want your feedback to schedule that.
- **WG Member: We would like to have time to schedule the next meeting, especially with the holidays.**
- Project Team: Bids are anticipated to be awarded in the April timeframe, and then we'll have meeting six and bring the contractor in.
- **WG Member: I thought construction was starting in April? So it isn't?**
- Project Team: It is our target, but we usually have notice to proceed within 30-days of award. Construction gears up slowly, it starts with potholing, submittals, pipe approvals and other elements.
- Project Team: Right now, the project is going through a constructability review to look at the timing and durations of the pipeline work so we'll be able to provide those updates at meeting five as well.
- Facilitator: It would be better for the group when telling other people about the schedule to say it is anticipated to start in the spring because all contracts wouldn't be let at the same time.
  
- **WG Member: We have a specific traffic (working hours) issue. Town Center has numerous parking spaces on both sides as you go down all the way up to Nobel. It's a lot of parking and a lot of people park there especially during lunch. You'll be coming down with your trench, so we'll lose those parking spots and people are going to want to park somewhere, so where are these cars going to go at lunch? They're going to want to park on our streets - Excalibur, January, Montrose. Believe me, Christmas time they already park there when the mall is overfull. We need some way to make sure our spots don't get taken. Could there be a temporary permit parking for these streets?**
  - o Project Team: That is hard to answer. During the day, traffic engineers would go and look at that street parking and utilize it if area is available during the day because it's a public street.
  - o Project Team: We also can't work on that street from November to January.
  - o **WG Member: Could you make it temporary resident parking during construction?**
  - o Project Team: We'll definitely evaluate it and add this to the matrix.
  - o Facilitator: I think they are asking if there could be temporary, resident-only parking.
  - o Project Team: We'll have to evaluate the situation but I might not have an answer for that until meeting 5.
  - o **WG Member: We have festivals where we shut down the streets, and get signs and it says, "no non-resident parking".**
  - o Project Team: We haven't done that before, so we'll have to look into it. We'll also have to work with SDPD.
  
- Project Team: One of the topics that came up last week was to only work weekends.
  - o **WG Member: It wasn't to only work weekends, it was to work or include weekends.**



- Project Team: There was a council resolution on April 10 to not work on Sundays on Genesee. It wasn't in other places, and it was part of the resolution, so we'll have to look at that.
  - Project Team: We'll modify the matrix to say in addition to working nights, work weekends, not versus working nights.
  - **WG Member: I don't see the suggestion about different working hours on Governor.**
  - Project Team: It is there, you are right it should say Governor not Nobel in the matrix. We will update the matrix to the right street.
- **WG Member: A lot still say they are being evaluated.**
  - Project Team: They will all be evaluated at the same time and it is expected to be completed before meeting five. We have to have those recommendations evaluated before the specifications are written. Regarding working early mornings and potentially starting at 6 a.m. at the Genesee at Governor location, it might be tough to do at that location.
  - Project Team: If I have to close lanes in the direction of traffic it takes more time to look at, we are looking at it and at the traffic counts.
- **WG Member: There is a part of the map where you're on both sides of Genesee.**
    - Project Team: We had to split the brine line and the force main in one portion, but they won't be constructed at the same time.
- **WG Member: We didn't ask for the trees to be replaced with the same species, we would like for the existing tree to be the same size, not species. We are more concerned about the size of the tree, not the species.**
    - Project Team: Our City policy is to replace it with the same species.
    - **WG Member: I'm going to disagree with the other member because if it is only a few trees, I'd want them to match. I'd want the same species.**
    - Project Team: We will hand out the tree selection guide as a reference for the group.
- **WG Member: Could we have a subcommittee for people who are into the trees?**
    - Project Team: That would come back to Steve as we're moving along the pipeline alignment.
    - Facilitator: Who would Steve ask?
    - **WG Members: Ruth, Merle and Debby.**
    - Project Team: We'd let a lot of people know.
    - **WG Member: I am most concerned with the size of the tree, and that if a tree is removed, the new one will be comparable in size.**
    - Project Team: Regarding size, we would buy the largest possible. My intention is to save the trees that are there. I don't want to have to replace any trees. I don't want to have to replace the trees, so our first goal is to keep them.
    - **WG Member: Do you have an identification of the types of trees that can be used to replace ones that may need to be removed?**
    - Project Team: I believe those trees been identified as part of the EIR.

- **WG Member: Will you have a timeline where you wait to see if the tree is suffering as a result of construction?**
  - o Project Team: We have a PEP – Plant Establishment Period, where we’ll make sure it is okay.
  - o **WG Member: Some trees don’t see distress right away.**
  - o Project Team: If a tree dies, we’ll deal with it.
  - o **WG Member: It could take a year for the tree to die.**
  - o Project Team: I’ll take the blame if it was caused by us. We also take pictures if we encounter any roots during construction, and the arborist would review and would be on-call to look at the trees ahead of time.

### Revisiting Follow Up Items

The following are comments and questions from WG members:

#### *Construction Map*

- **WG Member: (Referring to the map with a nominal, conservative construction schedule on it) Which way are you starting and going, and is it 60 days of continuous work? This is a long time for 16 homeowners to be impacted. And across the street is the mall, so the only other place people going to the mall can park is on these side streets or Renaissance.**
- Project Team: This will be a continuous project, constructing the pipe until it gets finished. We’ll know more once we get a contractor on board. There is urgency once you start to finish. If we ran into some unknown there, some utility, something we don’t anticipate, we’ll have to divert these crews to another portion of the project.
- **WG Member: Has that happened to you on a large project?**
- Project Team: We have found human remains in La Jolla Shores, Native American settlements. Dinosaurs also stop projects. Work would stop for that period, but no there would be no starting and stopping.
- **WG Member: Are you working on both sides of the street at Genesee and Decoral?**
  - o Facilitator: That’s where one line is on one side and the other is on the other side.
  - o Project Team: They won’t be at the same time, we’ll do one side then come back and do the other side.
- **WG Member: How long would the tunnel section take?**
  - o Project Team: That is estimated at six months.
  - o **WG Member: So you’ll be there at that corner for six months?**
  - o Project Team: We are double-checking all these durations and we’re getting better, more realistic numbers and we’ll have those for you.
  - o **WG Member: Is this is the same map you brought to UCPG?**
  - o Project Team: Yes.
  - o Facilitator: Will it be to this detail in the bid specs?

- Project Team: We initially use conservative numbers with longer durations, but the construction could happen quicker. The time will ultimately come down to the construction crew, but we have given them their time-windows.
- Project Team: The plans you have now with aerial behind them in your binders are current, this map was done a while ago. The ones in your binder are correct.
- **WG Member: Look at one section, 12 days, 15 days, whatever it is. You'll start digging a trench, at the end of the day you've gotten so far, plates go over it. Will cars be allowed to drive over those plates?**
  - Project Team: Yes.
  - **WG Member: So at no time it'll be undriveable?**
  - Project Team: During non-working hours the streets will be drivable. During the process, they're backfilling.
  - **WG Member: Do machines go in there and do the weld?**
  - Project Team: No, its actual people.
- **WG Member: I was told construction is on the southbound lane in Genesee, but I see it on northbound.**
  - Project Team: That is incorrect on this map, this is not current. This was a planning tool for timing for the presentation at the Community Group Meeting. Right now, we're doing a detailed look, at this stage we couldn't look at that.

#### *Detection*

- **WG Member: Regarding volume sensors and pressure sensors, I still have a concern. With the potential for 347 gallons to be spilled per second before you detect it and it taking 30 to 45 seconds to detect a change, the 1/10<sup>th</sup> is so low the volume sensor wouldn't detect that, and the pressure sensors are looking at pressure loss. It could be a slow leak at 100 gallons per second which could potentially cause a sinkhole.**
  - Facilitator: I think there is still confusion between flow and the pressure.
  - Project Team: 1/10th on the flow. There are two pieces you have to comparatively look at. Looking at pressure, what we're pumping out to the system, and we're looking at flow within the system too.
  - **WG Member: I understand that, but I'm concerned too much could leak before its detected.**
  - Project Team: If a hole develops before you're getting a leak, it'll know almost immediately, by within half a second, because the pressure will change. The pipe will be off of its normal performance and will shut down.
  - **WG Member: I've worked in a lab and had without seeing changes in the pressure.**
  - Project Team: The pump is working harder and at a larger scale and will not operate outside its operating band – these are really expensive pumps and don't want to break them, on top of not wanting a spill.

- Project Team: When we say 30 seconds, that is to shut the system down completely, not to detect a change.
- Project Team: Additionally, to complete the question, a sinkhole is when things are sucked in. This wouldn't happen.
- **WG Member: At some points you're only burying the pipe at six feet, and I would like you to be deeper. (Such as at the intersection of Governor Drive).**
- Project Team: When the pipe is at a depth of six feet, that means the area is one of the lowest pressure zones. Also, at that intersection, there are other things underground there, so we had to fish the pipeline through and find a depth while dodging other utilities.
- **WG Member: And work would only take two days?**
- Project Team: No, we put ten days leading up to it, then two days with an actual shutdown in the center, then the exit portion as we come out.
- **WG Member: Is there a depth that is deeper that can avoid all these utilities?**
- Project Team: That would be extremely deep and there isn't digging equipment that can't get down there.
- **WG Member: I don't understand the answer.**
- Project Team: There is no equipment available that can go deeper. We had to avoid other utilities and keep it within reasonable construction parameters to get us there.
- **WG Member: What is there at 15 feet?**
- Project Team: There is a regular water system. That intersection has every utility there.
- **WG Member: Wouldn't it make sense to tunnel under there?**
- Project Team: We are looking at that, at the fifth meeting we'll be able to present those options.

### *Maintenance*

- **WG Member: When the pipeline isn't pumping, how do you clear it out, for maintenance and other purposes?**
  - Project Team: There are drains in the pipe, and it all goes over to sewage.
  - **WG Member: So the sludge or whatever is in that pipe goes over to the sewer. Can one get to the other?**
  - Project Team: There are valves in between.
  - Facilitator: How often would you have maintenance?
  - Project Team: Every five years.
  - Facilitator: So you'd go in there and be able to see any corrosion, etc.
  - Project Team: We'd probably put in cameras first, and then we'd do an entry if needed.
  - **WG Member: If something is corroded after five years, what do you do?**
  - Project Team: If it is just a degradation of the mortar, we could come in and put more mortar in, or could line it with epoxy.

- Project Team: There are multiple ways to repair a pipe, such as a steam balloon, spraying in place, manual repair or taking out the pipe and replacing it. And the cameras can measure many things including thickness, sound, etc.
- **WG Member: How long are you expecting this pipe to last?**
  - Project Team: Unprotected steel pipe lasts 75 years. With all the additional measures taken for this pipe, we expect it to last well over that.
  - Project Team: We do rehab on pipes often and go in and do repairs.

#### *Tour*

- Facilitator: For the tour, would you prefer week or weekends? We could give several choices, maybe a Doodle poll.
  - **WG Member: We would like options.**

#### *Budget*

- **WG Member: You have a budget and with tariffs on steel and other things, are you looking at the price at all?**
  - Project Team: We've done some market studies so far and haven't seen effects yet from the tariffs but we're monitoring that closely for potential increases in price.
- **WG Member: Is there a US manufacturer?**
  - Project Team: The Air valve release vacs are built in Australia, but we have Buy America clauses. The project uses American steel, and the recommended pumps are manufactured in Kansas City.

#### *Valves*

- **WG Member: About the release valves – how often do the carbon filters get changed?**
  - Project Team: Typically depending on the size of the cartridge, we do them depending on the recommendation from the manufacturer. If we find there is a location that it is not lasting as long, we'll switch them out.
  - Project Team: We consider that adaptive management – if we need to switch it out we will.

#### *Other*

- **WG Member: Being a registered, professional engineer myself, I think the group needs to take into consideration that at the end of the day, these two gentlemen do this every day and don't want to lose their licenses, so I think you all need to keep that into consideration. As far as failure and operation, we do this every day.**
- Facilitator: I hope you get the sense that these gentlemen care deeply and have given it as much thought as professional engineers know how to give, and I think they've

been here and tried to answer your questions to the best of your ability and you're right you deserve it and they've tried to deliver.

- **WG Member: I wanted to say one more thing, that we represent more of the community who wouldn't be as polite as us and we've gone back to the community and tried to calm them.**
- Facilitator: It has been really clear that you've been representatives on this group for the community as a whole like that, serving as that liaison the way you have, absolutely.

### Public Comment

At the meeting's closing, L. Michaelson invited members of the public to provide comment.

Public comments:

- **Public: Is all the funding in for this? We're worried about it starting and then running out of funds.**
  - o Project Team: At the point of council authorization, we'll have to show that all of the funding is available. We're working on that and are putting together a schedule as to when all of those funds are coming. Typically, we have commitments on funding and phase fund a project.
  - o Public: What if somebody backs out?
  - o Project Team: We haven't had anything like that happen on projects like this, including projects with costs such as one billion dollars over five years.
  - o Public: Will you have the commitment before you start the project?
  - o Project Team: Yes, we will.
- **WG Member: I have a question, this will be great water from San Diego, not from Colorado. How much lower will my water bill be?**
  - o Project Team: Initially it will be more. We discussed the acre-foot rise though, and in a few years, the cost of imported water will become more expensive than this water. It is like an investment property, you have a portfolio of waters and look at the best to buy.
  - o WG Member: When will the rates start going up and what is the percentage of increase?
  - o Project Team: Public Utilities went with a rate increase in 2015 and there are scheduled increases over the next 5 years.
  - o WG Member: My understanding was that it's a total of 81% by the time this project is complete.
  - o Project Team: We had a 2.1% increase, and next year is the last one and is expected to be 6.9%, and it can change because it has to do with who we buy water from the San Diego County Water Authority.
  - o Facilitator: And these are compounding?
  - o Project Team: Yes.
  - o WG Member: Does this take into consideration the cost of this construction?
  - o Project Team: Yes it does, taking account of expenses through 2020. In 2020 we will do another study and look at projected costs going into the future.

The cost of service study will take place in 2020 and there will be a robust public participation component in that process as well.

- Project Team: San Diego pays Tier 1 rate, for water, which comes from the San Diego County Water Authority. If we are in a drought or for some other reason, it can move to Tier 2 or Tier 3. That is a penalty you're paying because the state has to find other water. So what is great about this kind of program is that it gives you more water that keeps you in the Tier 1 level.
  
- **Public: Looking at the area along Genesee and Governor going north, is that one pipe on one side and other on the other side, or both in same trench or not known?**
  - Project Team: It is known, most of the time it is in the same trench, in some places we had to split it and that is online and on handout three.
  
- **Public: I appreciate you looking at weekend work on Genesee there, because I live there, and I know there will be some night work. I know you're going to look at Saturdays and Sundays, and working weekends and not five nights a week would be much better.**

### Closing and Next Steps

L. Michaelson closed the meeting by thanking the WG members for their time and participation. He also recapped the next steps, including a poll that will go out for a tour of the wastewater facility, an updated invitation to the fifth meeting and an update to the matrix, and the fifth and sixth meetings that will include study options at the intersection, the community outreach plan and the bid specifications.