

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

City of San Diego North City Water Reclamation Plant Thursday, June 28, 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 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 Ruth DeSantis, UC Community Foundation Merle Langston, UC Community Association Rita Lim Wilby, Resident, Chemist, Business Owner Jerry Malamud, Resident Pia Mantovani-Suel, Resident Amy Murad, Resident

#### **Working Group Members Absent**

Bob Brown, UCSD Dan Harvey, Organic Chemist Katie Rodolico, Resident and Engineer Tama Snow Andie Hosch, University Community Planning Group

#### **Project Team Members Present**

Brent Eidson, City of San Diego Stephen Lindsay, City of San Diego Sean McCarty, Consultant, City of San Diego Joe Long, AECOM Alan Shapiro, AECOM Lewis Michaelson, Katz & Associates Shannon Slaughter, Katz & Associates Tiffany Ngo, Katz & Associates

#### **Other Attendees**

Bridger Langfur, Council District 1

### **Public Members Present**

Judie Malamud, Vista La Jolla Eleanor Beck, Vista La Jolla Lynn Newman, Vista La Jolla

# Mark Elliott, CH2M/Jacobs

### Welcome and Introduction

Brent Eidson welcomed the University City Working Group (WG) to their first meeting with a brief overview of what to expect, and thanked them for their commitment, participation and feedback. Lewis Michaelson then introduced his role as facilitator, emphasizing that the working groups' mission and principles were carefully crafted to ensure the best use of everyone's time, and went over the meeting's agenda and objectives, beginning with introductions around the room.

WG members received binders containing the Mission and Principles of Participation, WG member roster, contact information for their WG liaison, meeting schedule, ground rules, the meeting agenda, PowerPoint presentation, maps of the North City Pure Water Pipeline alignment through University City, the current construction contracts specifications, fact sheets on the Phase 1 Projects and Morena Pump Station and Pipelines, and FAQs on the Morena Pump Station and Pipelines and the Pure Water EIR and Morena Project.

To view project and meeting materials, including new binder contents, visit the Pure Water San Diego website at <u>www.purewatersd.org/Phase1</u>.

### Working Group Overview

L. Michaelson began the meeting by providing an overview of the WG's Mission, Principles of Participation, ground rules, binder materials, and the WG meeting schedule. He reminded the WG that these meetings are not about the project's alignment, but that their local voice is essential to mitigating issues related to the project, because they know things the project team does not know about their community.

### Pure Water Program: North City Phase I Projects

B. Eidson provided a presentation on the Pure Water San Diego Program and Phase 1 Projects that included information on the City of San Diego's existing water supply system, water supply challenges, efforts to diversify water supply sources, the need and goals of the Pure Water Program, testing completed to date at the Pure Water Demonstration Facility, and the planned phasing and locations of the Pure Water facilities through 2035.

Additionally, B. Eidson's presentation provided an overview of other Phase 1 Projects, including the Morena Pump Station and Pipelines, North City Water Reclamation Expansion, North City Pure Water Facility, North City Pure Water Pump Station and Pipeline, and the North City Renewable Energy project.

The following are comments and questions from the WG members, organized by topic:

### Route

- WG Member: Regarding the Morena Pump Station slide, why is it that route, why not straight?
  - Facilitator: The answer to that question is in the Environmental Impact Report (EIR), and that is specifically one of the things we aren't talking about in this group, there is plenty of information about it so that is an answerable question, but it is not the mission of this group.

### Wastewater

- WG Member: Where are the solids? What is being pumped? Will the new facility also be treating solids?
  - Project Team: It is raw sewage, and there will be solids. There is a treatment when it enters the facility and that takes some solids out. The North City facility will do the treatment.
- WG Member: How long does it take for the water to get from Morena to here (North City Water Reclamation Plant)? Is it using methane?
  - Project Team: No, we aren't allowed to due to state regulations. We will purchase the energy somewhere else. Regarding speed – during low pump conditions, it would take 11 hours and during high pump conditions, 6 hours.
  - WG Member: What is the pressure?
  - Project Team: We will get to that.
- WG Member: Regarding the 6-11 hours, what is the chemistry behind that?
  - Project Team: We will get to that, but part of it is that we don't want it to become septic, so we're using a high-purity oxygen system which is injected into the wastewater stream to keep it from becoming septic.

#### Odor

- WG Member: Does that (oxygen injected into the wastewater) mean we can expect no odors? What about from the plant?
  - Project Team: Yes, you can expect no odors along the pipeline route.
    Regarding the treatment plant, we do not have an engineer on that project here, so we are not able to answer that tonight.
- WG Member: We live across the street and sometimes with the wind, we definitely smell the plant. With it increasing (in size), will there be more smell, and will something be done about it?
  - Project Team: We will get to that topic later tonight.

### **Miramar Reservoir**

- WG Member: Will the level of the water rise?
  - Project Team: No, we fill it currently with imported water and so Pure Water will allow us to stop using that and we will be able to manage the level of the water just as before.

### **Renewable Energy**

- WG Member: How is that (renewable energy, methane gas) being pumped?
  - Project Team: It will be pumped through a 12-inch methane gas line that already exists from the Metro Biosolids facility, which breaks down solids, and there is a solids line that goes from there to the North City WRP that has been there since facilities were constructed. It will also provide energy to the Marine Corps air station.
- WG Member: Why don't we use solar energy?

 Project Team: Energy requirements for those pumps well exceeds the capability to power these facilities. We would need around 100 acres of solar panels to be able to substitute solar power.

# **Other Water Sources**

- WG Member: We haven't heard anything about ocean water is that going to be mentioned?
  - Project Team: That topic will be mentioned and is covered in the presentation.

# Funding

- WG Member: Where are we with the competitive grant the project applied for?
  - Project Team: We were not successful in receiving that particular grant. However, we are always looking for grant money. We have other funding options we are looking at – low interest loan funding; EPA program money that we'll hear back soon on; and the State Revolving Fund. Many things will mix together to finance this program.

# North City Projects/University City Alignment Overview

Joe Long provided an overview of the North City Pure Water Pipeline alignment through University City, and the type of construction that will take place along the alignment. He then went over the 11 construction topics that will be discussed with the WG over the course of three/four meetings and encouraged the members to keep the list of topics in mind as the presentation progressed. The topics include project coordination to address potential disruptions, street restoration, air quality/odor/noise, staging areas and parking, environmental monitoring, traffic control and signage, specific stakeholder access needs, outreach/communication and notifications, work restrictions and construction phasing, working days and hours, and construction monitoring. J. Long then highlighted the two construction topics that would be discussed later in the evening: 1) coordination between projects and 2) street restoration.

The presentation focused on the project's route and mentioned other work in the area and how the City worked to plan out combining the installation of this pipeline with other capital improvement projects for the area. There will be two separate pipes in the trench, made primarily of steel or high-density polyethylene (HDPE) pipe and placed closely together – one pumping wastewater to the North City facility, and the other sending brine back to the Morena Pump Station. Brine is what is left in the filters as the wastewater runs through them. It is mostly water and is collected, then processed and sent back. J. Long walked the group through the various alignment sections, including tunneling sections, vents and turns.

The following are comments or questions from the WG members, organized by topic:

# Wastewater Pipeline

- WG Member: Why change from a steel pipe to a high-density pipe?
  - Project Team: HDPE pipe is engineered for this type of facility. In the areas where we'll use that type of pipe, it'll be in a low-pressure area. The lifespan

of those pipes is documented to be over 100 years, so where it makes sense to use it, it will last longer and need less maintenance that the steel pipe.

- WG Member: How much of the road/street will the size of the two pipes take up?
  - Project Team: We expect the lines to be parallel, but we are unsure of whether there will be one big trench yet. That will be up to the (construction) contractor. We dictate certain parameters but not to that degree.
- WG Member: Quicker is not always better, having these two pipelines close together in one trench in earthquake country seems like a risk to me wouldn't one rupture cause another rupture?
  - Project Team: Safety is addressed in the EIR, but we do not have that analysis with us tonight.
  - Facilitator: I think what the engineers were trying to say earlier is that there are fundamental minimums and requirements for safety, but that within doing it safely, there may be ways to do it more quickly.
  - Project Team: Yes, we have high standards that will be met, that is our job.
  - WG Member: Minimum requirements gets me worried.
  - Facilitator: When you have the opportunity to read the construction specifications document provided, it should give you a better idea of what the requirements are and how stringent you consider them. There are also FAQs that explain in more detail.
  - WG Member: Standards in the plan, quality and safety, it is all relative.
  - Project Team: It is in the presentation.
- WG Member: How large is the pipe?
  - Project Team: It is 48" in diameter on the inside and 54" on the outside. It is a double-welded steel pipe.
- WG Member: Is it a pipe-inside-a-pipe? Pipes don't always break at the seams. What are you doing to prevent something from cracking that pipe?
  - Project Team: No, it isn't two pipes. The joints overlap and are welded inside and outside.
  - Facilitator: These questions are answered in the FAQs and other documents. The Project Team will provide an answer, but I'm just letting you know that there are resources you can provide to other people.
  - Project Team: We measured using the highest pressure the pipe would experience anywhere along the alignment and designed the steel pipe for that level of safety and longevity. The inside has a one-inch mortar liner to protect it from corrosion, with other coating and safety measures. The pipe will be pressure tested multiple times by the contractor. It will be pressure tested to a level of 1.5 times more pressure than it will ever see. We will also be testing it with our City team. Also, if the pipe ever begins to experience too much pressure, the pumps will shut down. They won't try to keep pumping. Conversely, a drop in pressure would indicate a leak and the pumps will shut down in that condition as well. Most pipe failures are cracks and if there is a crack, the system senses it and shuts down.
- WG Member: My brain is wrapped around the statistic of 32 million gallons of water a day, which would mean 4.4 million gallons of water is moving per hour.

If there was a breach, and it took the crew 30 minutes to get there, the whole neighborhood would be under sewage.

- Project Team: We will get there, we planned time for that discussion.
- WG Member: What about seismic testing?
  - Project Team: There are two pieces to designing pipeline, internal pressure and external pressure. When the pipe is full it helps balance the pressure, but it is also designed to prevent crushing when it is empty. For earthquakes, it is fully welded, and when or if there is an earthquake, the pipe will stretch or compress, and in very severe situations, it will buckle. It would stay operable and have to be repaired, but it won't break.

- WG Member: Can you clarify how quickly you can shut the system down? That would allay some concerns. Worried about access, the homes closer to construction are going to be more affected.

 Project Team: It slows down over 30 seconds. If it starts to lose pressure, the system automatically shuts down and loses complete pressure almost immediately.

### Pressure

- WG Member: What about crush pressure? What can it bear? What if an aircraft accidentally crashed on it?
  - Project Team: The pipe could potentially bend but it won't crush. The pipes are designed to carry weight, a fire truck could drive right over it and it wouldn't crush.
- WG Member: What is the highest pressure in the pipeline? PSI (pounds per square inch) high point and low point. In the EIR it is listed at 260 psi and is lower in the fact sheet.
  - Project Team: The highest PSI would be at the pump station, about 260 PSI. It is a misunderstanding that people believe that as the wastewater travels through the topography, the pressure is high it is very, very low. In University City it is mostly below 100 PSI, in some spots its at 40 PSI.
- WG Member: At the entrance to the high school, is the pressure is high there because it's a low point?
  - Project Team: At the UC High School pressure will be around 125 PSI at the bottom of the tunnel. We will bring in the plans at the next meeting which show the hydrologic grade line and we can talk about this too.
  - $\circ$   $\;$  WG Member: What does "at the bottom of the tunnel mean"?
  - Project Team: We are going 80 feet deep at this location, so the pressure increase is due to elevation change. The tunnel is a fully welded steel casing that is filled with grout, so it is completely solid.
- WG Member: Will there be pressure sensors at intervals? Is it not important to measure pressure at stress points?
  - Project Team: We aren't measuring pressure along the pipe; we measure head of driving force at the pump. If that drops, we know something is happening, so the pumps automatically shut down.

### Brine

- WG Member: Brine? How much salt is there?

• Project Team: I am not part of the design team for the plant or water treatment facility, so I do not know the capacity of that.

# Location

- WG Member: Which side of Genesee (will the pipeline go down)?
  - Project Team: It will be on both sides; a portion is in the southbound lane and crosses over to the northbound lane to miss an existing utility. For part of the way, we will be in the dead center of the road.
  - WG Member: What side of Genesee are you coming up going up to Governor Drive? We want to know which side of the street work the pipeline is going to be on, so we can tell the community and people who live there exactly where it is going to be.
  - Project Team: Multiple members have asked about this for their area, next meeting we will bring diagrams with the sections of the pipe in this community highlighted, so everyone can see where it will be in front of their areas.
- WG Member: Why can't you post the detailed working drawings, so we know where everything is?
  - Project Team: We can't post them at this time due to copyright infringement laws because the plans are not final or signed, so the City does not have the right to post them. It would potentially give construction contractors an unfair advantage when bidding on the project if some see them and some do not. We'll bring a diagram with the exact location of the pipe and go over it. Once the drawings are posted and the contract goes to bid, then anyone can look at it.
- WG Member: Is all the pipe underground? What is the virtue of that? For example, by UC High School, the canyon goes down low, why didn't you use the bridge?
  - Project Team: We studied that and there were multiple reasons, mainly the bridge couldn't take having the weight of the pipe to be strapped to it, and the pipe was too large to go on the bridge.
- WG Member: How far down is the pipe buried?
  - Project Team: Minimum 6 feet and generally a maximum of 25 feet. In the tunnels, it would be 80 to 100 feet.
- WG Member: The pipeline runs in front of the high school, if its only 6 feet down at that point that is a concern. Will it be 6 feet or 20 feet down?
  - Project Team: It would be between 6 to 20 feet below the surface, we will bring the plans in.
  - WG Member: Can you bring that knowledge for the whole area, so I know how far down it is too? We'd be a lot calmer.
  - Project Team: Yes, we can.
- WG Member: I tried to Google to find precedent, somewhere else with a water system like this and couldn't find anything. Have other places done this before?
  - Project Team: We have two here in California for example, the Colorado River aqueduct has an elevation change from the dam to the lake that is a much higher pressure.

# • WG Member: What about ones with raw sewage?

 Project Team: Yes, sludge up to the Metro Biosolids facility from the Point Loma area is at higher pressure and goes along City streets including Friars Road, through the same typography. We have a map with pressurized raw sewage lines highlighted in the City to show you – anything in green is a raw sewage line under pressure. We've had high pressure sewage lines in our City for over 50 years.

# Vents/Valves

- WG Member: Where will the vents be located? Also, if (wastewater) travelling fast down these pipelines with these turns that is an impact on those pipes, wear and tear, so what happens if something happens?
  - Project Team: We aren't just using pieces of pipe welded together, the pipeline is designed to fit together with no bolted joints because a welded pipe spreads stresses out. The pipe has been designed to anticipate hydraulic effects, so you can turn water that wants to go straight. It does induce more force, but we've taken that into account with greater strength at turns.

# - WG Member: Are there check valves on the pipe? Other vents?

- Yes, there are isolation valves, so in an earthquake or emergency we could close off sections of the pipe.
- WG Member: How does the air vent work?
  - Project Team: It isn't an air vent, it is an air vacuum release valve. It is fully pressurized, so it can let air in. There will be no whistling. In planned operation, the pressure would always be above, and only in a maintenance shutdown, would the hydraulic grade line come down to drain out the pipeline.
  - Facilitator: I believe the concern is what escapes, if anything?
  - Project Team: If there is air in the pipeline that wants to come out, there is a carbon filter system at each vault. The air is in a closed system, and odors are scrubbed out. The little vent you may see is to let fresh air down into the vault itself, there are no fans and no electrical system to fail.
- WG Member: So, there is no effect if a kid throws a rock down or a car hits one? When you bring the street diagrams can we also know where the vents are?
  - Project Team: There would be no effect. You have these in the your neighborhood already, they are passive air vents. They would be located at the back of the sidewalk, behind it in the street rights-of-way, and we can point out the locations on the diagrams.
  - WG Member: So you can still walk on the sidewalk?
  - Project Team: Yes, you can walk by them no issue. It is similar to the size of a fire hydrant and located in similar places.

### Odor

- WG Member: We've walked by pipes in our community that have odors coming out of them.
  - Project Team: You smell things from a pipeline when an open-air system gets anaerobic, but that isn't normal. We will look at how wastewater cycles with

peak times, and we'll always have a hydrologic grade line above the pipeline with the high-purity oxygen being injected at all times to prevent those things from happening.

- WG Member: If we detect a smell, what should a citizen do?
  - Project Team: You would call the Public Utilities Department action line, the same as if you saw a water break in the community.

# **Construction Topics/Contract Documents**

Sean McCarty provided an overview of the construction contract documents that the City uses to determine the specifications and guidelines that the contractors are required to follow during construction. These documents include the Public Works Construction "Greenbook", which is used by over 200 cities/counties/agencies, and the Public Works Construction "Whitebook", which includes the City of San Diego's supplemental guidelines to the "Greenbook." Additionally, there are project-specific contract requirements and conditions detailed in the Site Development Permit approved by City Council, the City's Supplementary Special Provisions and project plan drawings. S. McCarty reviewed the Construction Contracts Specifications document provided to all Working Group members in the WG binders. This document details the minimum construction specifications related to issues such as noise, schedule restrictions, construction phasing, work days and times, dust control, air quality, odor, work zone details and staging, traffic control, road restoration, spill prevention, fire protection, biological resources, tree removal, cultural resources, and time lapse cameras.

The following are comments or questions from the WG members, organized by topic:

### Accountability

- WG Member: I used to ride my bike up Gilman. In the 1990s, a development was built but the bike lane wasn't cleaned up for years and wasn't safe. What has changed, because the street would've been under City oversight? How has the City changed enforcement?
  - Project Team: Our resident engineers have a responsibility to monitoring the right of way. Your example sounds like somebody not doing their job. That will be my job (Steve Lindsay), and if things aren't okay I need to know. I want to work with the community, so calling me is the quickest way to mitigate issues. We also have a hotline. I am committed and accountable so that these things don't happen, and if they do, they will be mitigated. We will have a construction community liaison for each project. My number won't be published, but I would want to meet throughout the project and don't mind giving out my number to the members of the working group. We have all of these specifications, but they mean nothing unless we enforce them.
- WG Member: You'll oversee the whole project? Would we call you or call the community liaison?
  - Project Team: I'll work with you directly, so I'll know you and I'll know the people to contact if there is an issue.
- WG Member: Are there going to be meetings during construction? I see four before construction.

- Project Team: The vision for these four WG meetings is that they are designed to solicit your feedback that isn't necessarily already covered in the documents so that we can put it in the bids, so that the contractors will be obligated to meet the conditions you set. Then S. Lindsay will make sure the contractors deliver. For follow-on information, it wouldn't necessarily be in the specific format, but we'll still contact you and have ways to contact you. We will talk about this in topic #8, so we are still planning it out. Typically, during construction, meetings would be shorter. We want to tailor it to your community.
- Facilitator: When we reach #8, Outreach, Communication and Notifications, on the list we will talk about this. Right now, we want you to help him figure out what goes in the bid specs. That is what is special about this Working Group process.

### Medians

- WG Member: I have a question and concern about medians. We have some bad looking ones, but others have mature, beautiful trees.
  - Project Team: We aren't touching those or coming close to them and we'll have an arborist come out to look at the roots. We'll have an environmental management plan and will work to save the trees.
  - WG Member: I'm worried about the root system.
  - Project Team: We encounter that all the time.

### Improvements

- WG Member: Are there ways of getting improvements to a particular area? A concrete median? A traffic light? Can we get something out of this, something communities have been asking for?
  - Project Team: We don't know what the things you've been asking for are, but let's talk about it during these meetings so that we can hear about your "asks" and try to look into it. We are funded with water/wastewater funds which can only be spent on those utilities, but certain things may cross over.

# Informational Construction Topic #1 Overview: Coordination Between Projects

S. McCarty provided an overview of the way the City coordinates on projects to avoid disruptions and the two projects that the City has combined with the North City Pure Water Pipeline to reduce community impacts, which include the addition of a right turn lane on westbound Miramar Road approaching Eastgate Mall and the replacement of waterlines along the North City Pure Water Pipeline alignment. The project also coordinates with Shift to receive regular updates on construction in the community. S. McCarty shared how the City monitors Capital Improvement Projects monthly to identify potential conflicts with other upcoming projects and how the City coordinates with agencies/companies outside of the City to notify them of the three-year road-work moratorium. Curb-to-curb pavement restoration will be provided along the alignment and existing pedestrian curb ramps along the alignment will be upgraded to meet ADA standards.

The following are comments or questions from the WG members, organized by topic:

### Medians

- WG Member: Will the street repairs be median to curb, or curb to curb without a median?
  - Project Team: In areas with medians, the restoration will be curb to median. That is a discussion with our plans, we can also bring the street restoration plans in to show you what we're doing in each spot.
- WG Member: Would medians be repaired if they were damaged during construction?
  - Facilitator: We talked through this regarding the "color of money" and how funds can't necessarily cross over. But within what is feasible and legal, my understanding is that the construction team would want to leave it in as good or better conditions than they found it.

#### Noise

- WG Member: My property abuts Genesee and I'm concerned about noise and vibrations from the digging/stability, can that be addressed next time?
  - Facilitator: If you look back at the topics list, we will take these things into account and if there is a way to accommodate, they can consider it. These concerns are applicable to topic #3.
  - WG Member: Also, how much vibration will there be, because we live on a big hill.
  - Project Team: That concern would fall under topic #11, if there are geotechnical issues along the alignment and concerns about settling and future properties, we would set up monitors. Generally speaking, it depends on the formation we are digging. We aren't blasting anything, and in all my years working we've never had any structural damage.
  - WG Member: What are you drilling through?
  - Project Team: Good material. Saw cutting is the loudest part but if we are working at night we do that work before 9 p.m.
- WG Member: If we have a map and we know that this is a house, this is our community, maybe plan to do that work during the day. Westfield, dig at night. A street with no houses, dig at night.
  - Facilitator: When we look at the map and plans the Project Team is bringing to the next meeting, you will be able to learn more specifically about the work on the ground. Doing that should give you a better idea of what they can and can't change. For example, whether it makes more sense to dig in daytime or at night.

### Duration

- WG Member: What is the approximate duration between cutting and paving?
  - Project Team: We have a construction map that will approximate the timing. We won't be working 24/7. When we are working in the street, there is traffic control, and when we aren't in the road there will be plates over the trench and the road will be open. Once the pipe is welded and backfilled, and covered with soil, then cold mixed asphalt will be put over it for no more than two weeks. Following that, we base pave, and then come back and do a permanent overlay for a smoother finish. We haven't ironed out the

approach yet and some sections will take longer than others, we can't give definite times yet but its on our minds.

- WG Member: If you're working on Genesee after 7 p.m., that isn't a lot of work hours unless you're working until early a.m.
  - Project Team: Once we're in the street, set-up and breakdown takes time. If traffic allows, we'll look at doing Monday through Thursday nights, 10 hours each night.

### Access

### - WG Member: I represent two communities, and some are one way in and out.

- Project Team: We looked at that, and we have a phased special traffic control plan so there is always access in and out.
- WG Member: Will there be a cutline for cross streets?
  - Project Team: There will be a cutline. For intersections, we will get into it a little more, but they won't get shortchanged.

### Hours

### - WG Member: So, work will be 7 p.m. to 5 a.m., how noisy will that be?

- Facilitator: We aren't going to talk about this right now because it is part of the homework. We are giving piecemeal information right now about it but will drill at the next meeting.
- Project Team: We are still looking at it and we will create a presentation on it, and then you can react to that.

### **Public Comment**

At the meeting's closing, L. Michaelson invited members of the public to provide comment. The following are comments provided by members of the public in attendance:

- Where you're going to dig is less than 20 feet from our bedroom, and there are nine other houses near the area, can we look into that?
  - Project Team: Yes, we can look into that.

### **Closing and Next Steps**

The project team thanked the WG members for their participation and L. Michaelson closed the meeting by reminding WG members that the next meeting will be held on Wednesday, July 18 at the same location. L. Michaelson also summarized consensus from throughout the meeting – that everyone will work diligently to make the working group process work and that we want to minimize the jumping around from topic to make sure it runs smoother. He reminded the WG members that the project team has committed to bringing in diagrams to the next meeting to really help the group go over the construction area with a visual aide. As requested, the project team will also provide a visual with the list of the 11 WG topics so that members can easily reference the list and remember what topics will be addressed later.