



# OFFICE OF THE CITY ADMINISTRATOR

Mark E. Farrell, Mayor  
Naomi M. Kelly, City Administrator



**Lifelines Council  
MEETING MINUTES  
June 7, 2018  
City Hall, Room 201  
11:30-1:00PM**

**Meeting #25 – Lifelines Council Charter, Restoration Performance Project, SFPUC Sewer System Improvement Program**

**Co-Chairs**

Naomi Kelly, City Administrator, City and County of San Francisco  
Chris Barkley, AECOM, Private Sector Co-Chair

**Represented Agencies**

AT&T	San Francisco Controller's Office
Comcast	San Francisco Dept. of Emergency Management
Sherwood Design Engineers	San Francisco City Administrator's Office
Port of San Francisco	San Francisco Airport
PG&E	San Francisco General Services Agency
Metropolitan Transportation Commission	San Francisco Public Utilities Commission
Extenet Systems	San Francisco Department of Technology
GGBHTD	San Francisco Municipal Transportation Agency
Kinder Morgan	San Francisco Department of Public Works
	San Francisco Office of Resilience & Capital Plng
	San Francisco Fire Department

**1. CALL TO ORDER**

Lifelines Co-Chair Chris Barkley called the meeting to order at 11:35am.

**2. INTRODUCTIONS AND AGENDA REVIEW**

Lifelines Co-Chair Chris Barkley reviewed the meeting agenda and announced PG&E was not able to present on Power Restoration Lessons Learned from Puerto Rico. Representatives from Recology and Kinder Morgan spoke about their keen interest in participating in the Lifelines Council.

**3. LIFELINES RESTORATION PERFORMANCE PROJECT**

Brian Strong conveyed an overview of the final Lifelines Charter. He also talked about the 2014 Lifelines Interdependencies Study which has led us to our current Restoration



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Performance Project. Laurie Johnson talked about three major hotspots for lifeline interdependencies identified in the 2014 report, including The Embarcadero, Sea wall and Downtown proper.

Co-Chair Naomi Kelly spoke about the importance of Lifeline Council meetings and highlighted that the Council will be important no matter which mayor wins the special election.

#### 4. **SFPUC: SEWER SYSTEM SAFETY IMPROVEMENT PROGRAM UPDATE**

Jignesh Desai of the San Francisco Public Utilities Commission provided an overview of the Sewer System Improvement Program (SSIP), the sewer system, its history and current challenges. He then described how the SFPUC is incorporating resilience in the SSIP implementation by following the endorsed level of service goals, using an urban watershed approach, considering a triple bottom line evaluation, and incorporating climate change effects.

There are three wastewater treatment plants in the City:

- Oceanside Plant: treats 15 million gallons/day (MGD) during dry weather and 65 MGD in wet weather (plus 110 MGD of decanted flow that enters into the Southwest Outfall for the discharge. The decanting process in the transport/storage boxes allows the floatable to stay within the system and not end up in the Ocean.)
- Northpoint Wet Weather Facility: used only for wet days (approximately 30 times a year): 150 MGD
- Southeast Treatment Plant: treats 50-60 MGD in dry weather and 250 MGD in wet weather

The system consists of numerous lift stations. It also has transport/storage structures along the perimeter of the City that captures and transports storm water to the various treatment facilities. The transport/storage structures **provide** treatment equivalent to primary treatment. Because San Francisco has a combined system, heavy rains can lead to permitted combined sewer discharges into the Bay and Ocean with equivalent of primary treatment. When the system reaches capacity during large storm events, localized street flooding can occur. Rising seas and more intense and frequent storms can overwhelm the system. There is an increasing need to protect the system from saltwater



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intrusion which limits the ability of the secondary treatment to function as designed. In wet weather, the system treats 575 MGD.

The system is aging and routine repairs are no longer sufficient to keep pace with the aging and seismically vulnerable system. The SSIP is designed to address these vulnerabilities.

The SSIP has the following level of service goals that have been approved by the Commission:

- Provide a Compliant, Reliable, Resilient, & Flexible System that can Respond to Catastrophic Events
- Integrate Green & Grey Infrastructure to Manage Stormwater and Minimize Flooding
- Provide Benefits to Impacted Communities
- Modify the System to Adapt to Climate Change
- Achieve Economic & Environmental Sustainability
- Maintain Ratepayer Affordability

In terms of responding to catastrophic events, the goal of the SSIP is for dry weather primary treatment, with disinfection, to be online within 72 hours of a major earthquake. Critical and new facilities will be designed to withstand M7.8 San Andreas Fault and M7.1 Hayward Fault events. Other objectives pertaining to this goal include reducing the number of overflow discharges, providing pumping plant redundancy for force mains, providing electrical redundancy at treatment facilities, and providing redundant pumps.

Phase 1 of the SSIP is \$2.9 Billion. Much progress was made on this phase in 2016 to 2018. The biggest projects are scheduled to be completed in 2025. Phase 1 includes \$505 Million in collection system upgrades, \$6.8 Million for Marin Street Sewer Replacement, \$419 Million for a new all-weather 250 MGD Headworks Facility at the Southeast Plant, \$1.27 Billion for a new Biosolids Digester Facility, also at the Southeast Plant. Other projects include Oceanside Treatment Plant upgrades, North Point Wet Weather Facility upgrades, North Point Outfall Rehabilitation, and Southeast Area upgrades.

The SSIP is also planning for sea level rise using an adaptation framework and the *OneSF Guidance for Incorporating Sea Level Rise into Capital Planning in San*



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*Francisco*, which sets standards for city-owned assets. The program is also incorporating innovative stormwater management solutions like green streets to beautify the neighborhoods and reduce/slow stormwater runoff.

Chair Chris Barkley asked about the progress on implementing the SSIP. Jignesh stated that 24 of 70 projects planned for Phase 1 have been completed, with the goal of completing Phase 1 in 2025.

Michael Germeraad asked if the 72-hour LOS goal applied to treatment only, or to entire collection and treatment system. Jignesh answered that it applies only to treatment.

Brian Strong asked where we are in the program. Jignesh answered that 24 projects are complete with Phase 1 and will be compliant with the 72 hour LOS goal in 2023. The system can return to service from a Loma Prieta equivalent event, but not from a larger event yet.

Chris Jones asked about backup power for the system. Jignesh answered that they have generators for life-safety systems for employees, but no generator is large enough to support the energy needs of the process and pumping system. They are working on a redundant power supply, and can hold influent and implement primary treatment in the transport/storage structures for 48 hours if power is lost. However, this capability is only available in dry weather.

Michael Cochran asked if they could isolate a major pipe break, for example with automated valves that can shut off parts of the system. Jignesh responded that SSIP will add redundant force main for major pump stations that will be built to higher standards. Local gravity sewer system is built for wet weather flow, allowing de-facto redundancy for dry weather flows

Laurie Johnson commented that the 2014 interdependencies study noted the pumps on Embarcadero don't have backup power. Jignesh responded that SFPUC is adding a second feeder line, but no diesel backup power for lift pumps. He also noted that the sewer system can store sanitary flows for approximately 2 days and will require power restoration from utility providers to continue treating wastewater flows.



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Norm Abrahamson noted that ground motions haven't been set for the planning scenarios and there is a possible factor of 10 variability in possible ground motions from a given event. Laurie Johnson responded that most system owners have a clear understanding of the vulnerable parts of their system.

Norm Abrahamson noted that systems are designed for shaking, not magnitude. Jignesh responded that the design team performs soil structure interaction (SSI) analysis for the design of system upgrades, which accounts for shaking.

## 5. OPEN DISCUSSION AND ANNOUNCEMENTS

Jignesh Desai said he was happy to help arrange a tour of the Southeast Plant. Chair Naomi Kelly asked that staff set it up and invite anyone to join.

Member Mike Dayton noted that there is a conflict with the next Lifelines Council Meeting on September 6th. Chair Naomi Kelly requested that the meeting be changed to an alternate date.

Nina D'Amato announced that the first test of the AT&T First Net for prioritization of communications for first responders will take place at Pride and Fleet Week.

Diana Bartram announced that exercises on fuel delivery to San Francisco will also take place during Fleet Week at the Port reopening workshop. This exercise will focus on how we request and deliver fuel with actual ships carrying fuel (water) on the Bay. Chair Naomi Kelly asked that they make sure Purchasing is part of the exercise.

## 6. ADJOURN

The meeting was adjourned at 12:38pm.

### List of Attendees

Naomi Kelly	City Administrator
Chris Barkley	AECOM
Chris Jones	GGBHTD



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Mike Cochrane	GGBHTD
Sam Young	San Francisco Public Utilities Commission
Norm Abrahamson	UC Berkeley
Cynthia Chono	Department of Public Works
Sean Nozzari	Caltrans
Joseph Camicia	Extenet Systems
Scarlett Lam	San Francisco Municipal Transportation Agency
Michael Lennon	Department of Public Works
Brian Strong	Office of Resilience and Capital Planning
Danielle Mieler	Office of Resilience and Capital Planning
Bry Sarte	Sherwood Design Engineers
Cammy Blackstone	AT&T
Brian Henderson	San Francisco Public Utilities Commission
Michael Dayton	Department of Emergency Management
Michael Germeraad	ABAG/MTC
Matthew Wickens	Port of San Francisco
Rod Iwashita	Port of San Francisco
Nina D'Amato	Department of Technology
Peter Ohtaki	Wells Fargo/California First
Nicole Stewart	Kinder Morgan
Jignesh Desai	San Francisco Public Utilities Commission
Cecile Pinto	PG&E
Paul Giusti	Recology
John Porter	Recology
Mary Ellen Carroll	San Francisco Public Utilities Commission
Diana Bartram	Port of San Francisco
Lee-Ann Peling	Comcast
Larry Mares	San Francisco Airport
Ed Reiskin	San Francisco Municipal Transportation Agency
Michael Cochran	San Francisco Fire