



METROLINK®

# CENTRAL MAINTENANCE FACILITY ACTION PLAN *October 2019 Update*

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Being a Good Neighbor to the Communities We Serve



## **Section 1. Introduction**

Metrolink's mission is "To provide safe, efficient, dependable, and on-time transportation service that offers outstanding customer experience and enhances quality of life." That mission applies throughout the region, including to the communities where our trains operate or near our stations and maintenance facilities.

Metrolink provides great benefits to the region, such as reduced traffic congestion and emissions. Nevertheless, we realize there may be more localized impacts to the homes, businesses and communities located adjacent to our stations and maintenance facilities. The people who make up the Metrolink Board of Directors and staff pledge to be a good neighbor in each community where our stations and maintenance facilities are located.

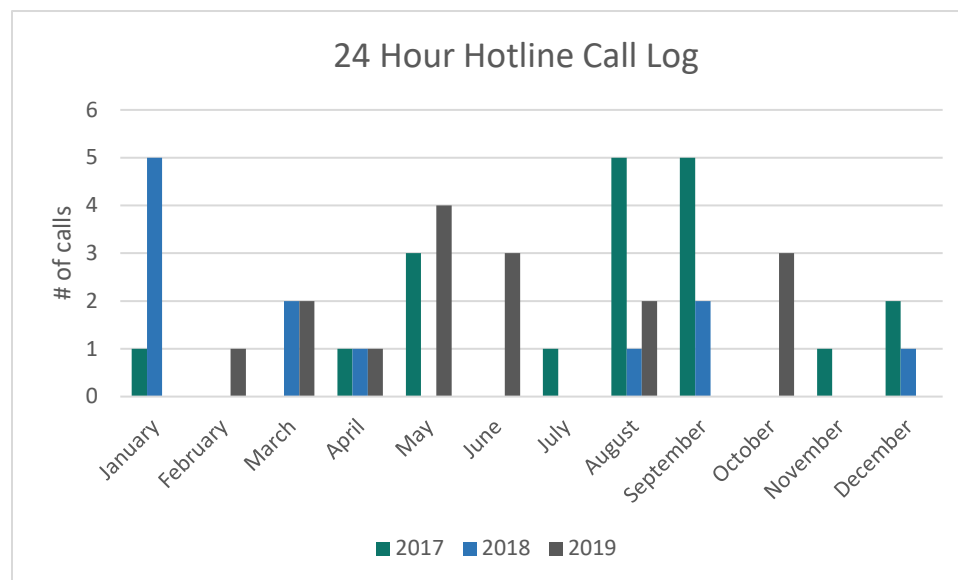
### **Background**

In order to serve the Southern California region, Metrolink operates 365 days a year. The Central Maintenance Facility (CMF) serves a critical role enabling Metrolink to provide this regional service. CMF is one of two service, inspection and repair facilities in the Metrolink system and the only facility equipped to handle heavy maintenance and repair. Following early morning peak runs, nearly all Metrolink trains arrive at CMF to be inspected, tested, fueled, cleaned and serviced for afternoon departures. During the inspection and testing process, Metrolink is required to run the locomotives and perform various functional tests mandated by the Code of Federal Regulations 49 Parts 200-299. Testing usually takes between 45-60 minutes per train set but may take longer depending on the status of the equipment arriving for service. Any defects found during testing need to be addressed prior to departure.

Metrolink has a long history with the CMF community -- including residents, businesses, elected officials and other stakeholders in Cypress Park, Glassell Park and Elysian Valley. In the past nine years, Metrolink has made various operational enhancements and modifications to reduce negative impacts to the community, including but not limited to:

- Purchasing 40 new clean Tier 4 locomotives that reduce emissions between 65% and 85% compared to legacy Tier 2 and Tier 0 locomotives, respectively (A \$279.8 million investment).
  - Initial purchase of 20 locomotives authorized by the Metrolink Board in December 2012.
  - Board exercised a contract option for another 20 units in July 2015.
  - 27 Tier 4 locomotives are in service, and 20 Tier 0 locomotives have been decommissioned.
- Using ground power stations at the Service and Inspection track locations at CMF to provide power when locomotives are being serviced, which has reduced idling noise and emissions. In March of 2015, this program was expanded by adding five ground power stations. Overall, this program has reduced emissions, as follows:

- **Use of ground power reduced idling time by 14%** at CMF from 2010 to 2017;
  - **70% reduction of average Head End Power (HEP) engine run time** at CMF from 2010 to 2017 achieved by the implementation of Automatic Engine Stop-Start (AESS), reduction of trains at CMF from 40 trainsets to 25 trainsets, use of ground power, and optimized operational practices;
  - **47% reduction of average locomotive engine run time** from 2010 to 2017 achieved by the implementation of (AESS), reduction of trains at CMF from 40 trainsets to 25 trainsets, and optimized operations practices;
  - Reduced **HEP and Locomotive engine runtime** at CMF by **58%** since 2010 by the implementation of AESS, reduction of trains, use of ground power, and optimized operational practices.
- In August 2016, Metrolink established a 24-hour hotline for the community to contact staff in order to report anomalies taking place at the CMF. A graph of the number of calls taken since 2017 can be found below.



- Limited the hours for load testing, the loudest maintenance activity, and sand deliveries to reduce early morning or late-night disturbance to the community.
  - Assuming no emergencies load testing occurs during the weekdays from 9:00 a.m.- 6:00 p.m. and on the weekends starting at 10:00 a.m. These updates were made in April 2016.
  - Sand delivery process changes made in December 2018

Despite the modifications and commitments made in the past, members of the CMF community expressed concerns to Metrolink’s Chief Executive Officer Stephanie Wiggins at a community meeting on April 11, 2019. She committed to review the concerns raised at the

meeting with her team and to come back to the community with an action plan. On May 9, 2019 Ms. Wiggins introduced the CMF Community Action Plan to the community and committed to provide monthly written updates and quarterly in-person meetings to discuss progress.

**Section 2. Action Plan Outline**

Our approach to the action plan is to focus on three key areas




- Audit Current Operations: We will audit operations to ensure we are adhering to commitments made to the community by Metrolink in the past. Staff will re-evaluate our current operations to determine what other modifications we can make to be a better neighbor.
- An Independent Noise Study: We will engage a third party to conduct an independent noise study in coordination with the community.
- CMF Modernization: We will develop a CMF Facility Modernization Plan to identify major improvements that can modernize the facility operations to enhance the quality of life experience of the communities living near the CMF.


The action plan is divided into three timeframes: short-term (0-6 months), mid-term (6-18 months) and long-term (18+months) (Table 1).

Short-term (0-6 months)	Mid-term (6-18 months)	Long-term (18+ months)
<ol style="list-style-type: none"> <li>1. Optimize Use of Ground Power Stations</li> <li>2. Installation of Sound Monitors</li> <li>3. Internal Audit</li> <li>4. Independent New Noise Study</li> <li>5. Expedite 8 Tier 4 Locomotives into Service</li> <li>6. Change the Accountability Metrics of the Equipment Maintenance Contractor</li> </ol>	<ol style="list-style-type: none"> <li>7. Fleet Modernization Study</li> <li>8. CMF Modernization Study</li> <li>9. Complete Deployment of 40 Tier 4 Locomotives</li> </ol>	<ol style="list-style-type: none"> <li>10. Work Towards a Zero-Emissions Future</li> <li>11. New Contracting Approach System-Wide Goes in Effect with New Accountability Metrics</li> </ol>

**Table 1.** Shows the action items divided across the different timeframes.

**Section 3. Community Action Plan-October 2019**
**SHORT-TERM (0-6 months)**

Action Plan	Description	Completion Time Frame	Status update
<b>1.</b> Optimize Use of Ground Power	Metrolink will establish ways to optimize the use of existing ground power stations at the CMF to reduce idling. Ground power stations provide power to the locomotives to run lights, and sometimes the air conditioner as the locomotives are being serviced. There are currently 19 ground power stations at the CMF. These ground power stations help reduce noise emissions as locomotives are being serviced.	By August 1, 2019  	July 30, 2019: Evaluation and analysis were completed on July 25 ahead of schedule. Working with contractor to implement plan by Fall of 2019. (100% complete) (See Appendix A.)
<b>2.</b> Installation of Sound Monitors	Metrolink will install sound monitors throughout the yard to better track the origin of sound emissions to improve operations. By internally keeping track of sound we will have a better understanding of where sound is emitted from on our yard. This information will help us identify ways to improve operations to reduce sound emissions.	By July 1, 2019  	July 1, 2019: On June 12, staff installed 2 monitors and rotated them throughout the yard at 8 strategic locations. Completed on July 1, on schedule. (100% complete) (See Appendix B.)
<b>3.</b> Performance Audit Report	Metrolink's Internal Audit department, which reports directly to the Metrolink Board of Directors, will audit the agency's CMF operations to ensure we are adhering to the previous commitments we have made to the community. The results will be presented to the Metrolink Board and shared with the community.	By November 9, 2019	October 30, 2019: Internal Audit has begun drafting findings and scheduled meetings with management of audited teams. We are currently awaiting responses from the community survey. (75% complete)
<b>4.</b> LA Metro New Noise Study	An independent new noise study will be conducted and paid for by The Los Angeles County Metropolitan Transportation Authority (LA Metro).	By November 9, 2019	October 30, 2019: Funding is being sought for the study. (5% complete)
<b>5.</b> Expedite 8 Tier 4 Locomotives into Service	Metrolink has ordered 40 Tier 4 locomotives. As of initiation of this action plan on May 30, 2019, 23 locomotives had been delivered, with 15 of those units being deployed. Metrolink will expedite the deployment of the remaining eight Tier 4 units that have been delivered.	By November 9, 2019  	August 22, 2019: Eight more Tier 4 locomotives have been deployed, for a total of 23 now in service. Ahead of schedule. (100% complete) (See Appendix C.)

<b>6.</b> Add Accountability Metrics for the Equipment Maintenance Contractor	Metrolink is in the process of changing our approach on how we hire equipment maintenance contractors. Metrolink is enhancing our maintenance contract and adding accountability metrics as part of the new bundled contract. This new structure will bundle rail operations, maintenance, and support services to improve the customer experience and service reliability, while maintaining the agency's strong commitment to safety.	By July 1, 2019  	July 1, 2019: Advertised in RFP with more specific requirements and higher assessments for contractors who do not comply with requirements at CMF. Completed on June 17, ahead of schedule. (100% complete) (See Appendix D.)
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**MID-TERM (6-18 months)**

<b>Action Plan</b>	<b>Description</b>	<b>Completion Time Frame</b>	<b>Status update</b>
<b>7.</b> Fleet Modernization Study	Metrolink will conduct a Fleet Modernization Study to identify other emission control methods and review vehicle technologies such as battery-operated locomotives and zero-emission multiple units.	Targeting Winter 2020 to commence study	October 30, 2019: Staff is working through the procurement process to initiate the study with a consultant. The study is expected to commence in December 2019. Staff are closely monitoring and keeping track of the information regarding advancements by other agencies and freight railroads to pilot zero and near zero emissions technology. More detail is provided under zero emissions future item. (9% complete)
<b>8.</b> CMF Modernization Study	Metrolink will conduct a CMF Modernization and EMF Phase 3 build out Study which will include the review of the 30+ year old facility, identify state-of-the-art facility operations, and integrate community input into service expansion design.	Nov 1, 2020	October 30, 2019: Staff is working through the procurement process to initiate the study with a consultant. The study is expected to commence in December 2019. Hood technology, as well as other noise mitigation measures are identified in the study scope of work.

			While attending the Commuter Rail Operations Group meeting in Seattle, Metrolink staff toured newly opened Amtrak locomotive shop. (9% complete)
<b>9.</b> Complete Deployment of 40 Tier 4 Locomotives	Deploy all 40 Tier 4 locomotives.	Summer 2020	October 30, 2019: 24 of 40 locomotives deployed. (60% complete)

**LONG-TERM (18+ months)**

<b>Action Plan</b>	<b>Description</b>	<b>Completion Time Frame</b>	<b>Status update</b>
<b>10.</b> Work towards a Zero-Emissions Future	Metrolink will pilot a program to explore battery operated locomotives or other technology to reduce emissions, which will initially be used in combination with diesel electric.	Will commence following completion of the Fleet Modernization Plan in late fall 2020.	October 30, 2019: As noted above, staff are closely monitoring and keeping track of the information regarding advancements by other agencies and freight railroads to pilot zero and near zero emissions technology. SCRRA has regular correspondence with BNSF about their battery hybrid demonstration project and has participated in separate discussions and workshops with the SCAQMD, Caltrans, California Energy Commission, Port of Long Beach as well as Metra (Chicago) to discuss the advancement of zero emissions technology. (9% complete)

<b>11. New Contracting Approach System-Wide Goes in Effect with New Accountability Metrics</b>	The implementation of the bundled contracting approach will include more specific and higher assessments for contractors who do not comply with commitments made to CMF neighbors.	By Spring 2021	October 30, 2019: Proposals for the bundled operations contract were received on October 25, 2019. Proposals are under review by evaluation team. (50% complete)
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**Section 4. Accountability & Transparency**

Accountability is important as we complete our action plan. Another aspect of accountability is providing more transparency. We will report on our progress and increase engagement with the community by:

1. Continuing the CMF monthly e-newsletter;
2. Updating the CMF Community Action Plan on a monthly basis and posting on the Metrolink website at: [metrolinktrains.com/cmfc](http://metrolinktrains.com/cmfc);
3. Holding quarterly community meetings.

**Contact information**

If you have any questions, please contact Sylvia Novoa, Metrolink Public Affairs Manager, at (213) 452-0300 or [Novoas@scrra.net](mailto:Novoas@scrra.net). We also have a 24/7 hotline (213) 452-0400. Or you can visit our website: [metrolinktrains.com/community](http://metrolinktrains.com/community).

If you would like to attend a Board of Directors meeting, information can be found at [www.metrolinktrains.com/about/board-meetings/](http://www.metrolinktrains.com/about/board-meetings/).



## Appendix A

### 1. Optimize Use of Ground Power

**Description:** Metrolink will establish ways to optimize the use of existing ground power stations at the CMF to reduce idling. Ground power stations provide power to the locomotives to run lights, and sometimes the air conditioner as the locomotives are being serviced. There are currently 19 ground power stations at the CMF. These ground power stations help reduce noise emissions as locomotives are being serviced. Completion time frame of August 1, 2019.

**Date Completed:** July 30, 2019

**Benefits:** Cleaner air and less noise

**Action:**

- Tracked power stations to evaluate usage of ground power and compiled analysis to determine how we can increase usage. (See Exhibit B for ground power location sat the CMF.)

**Findings:**

- Inconsistent use of ground power by contractors
- Some ground power stations were malfunctioning and needed repair
- Shortage of ground power stations
  - Shortage of ground power stations limit the number of ground power stations that can be used. Different locomotives require different adapter cables and different cable lengths. Bombardier performed a survey and inventory check of all cables at every ground power station at CMF and has identified cable types and quantities needed in order to utilize all ground power stations. Bombardier then provided request for additional cables to Material control to place order.

**Response by Metrolink:**

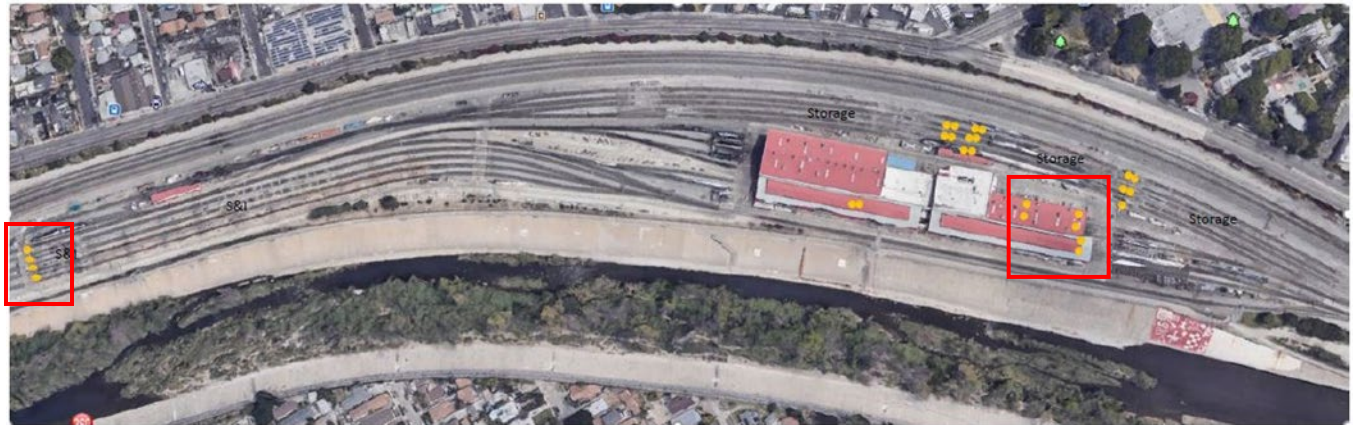
- Sent official notice to Bombardier regarding required use of ground power.
  - First project letter was sent from SCRRA on 8/22/19 for Bombardier to implement a daily checklist which includes when unit was connected to ground power and when it was disconnected. We requested Bombardier to provide proposed daily checklist format. Over next two weeks, SCRRA and Bombardier worked on final format of tracking sheet as well as creating an SOP. On 9/16/19, SCRRA issued final SOP and tracking sheet that Bombardier would use and provide on a daily basis as part of their Morning submittal packet.
- Repair ground power stations as defects are reported.
  - The repair of ground power stations has been an ongoing task. On daily basis, Bombardier's Morning packet report has a section that lists facilities issues. Facilities team then coordinates to address these. On 8/26/19, Bombardiers report was that only ground power station functional at storage tracks is one on 1A and all were repaired by 9/4/19. As of now all are functional, no reports on Bombardier Morning packet.



- Placed order for additional cable connections.
  - Bombardier provided final request for shortage of cables to Material control on 9/11/19. Order for shortage of cables was issued to vendor on 9/13/19. Lead time for various items vary from 11/30/19 to 12/6/19.
- Established new procedures to track and document plugged-in equipment and power station defects.
  - New procedures to track ground power station usage in effect as of 9/16/19 when SCRRRA issued final SOP and tracking sheet that Bombardier would use and provide on a daily basis as part of their Morning submittal packet.
- Established policy for locations where ground power is not accessible, available or practical to shut down equipment if departure time is more than one hour away
- Work with contractor to enhance ground power optimization (beginning mid-October)

**Results:**

- Increasing usage of ground power during servicing by four more train sets per day will reduce up to 150 hours of idling per month
  - The results will be seen when cables have arrived, and all ground power stations can be used under ideal conditions (i.e. equipment can be plugged in and other service/troubleshooting is not needed requiring equipment to be running)

## Exhibit A



-  Single ground power station
-  Double ground power station

## Appendix B

### 2. Installation of Sound Monitors

**Description:** Metrolink will install sound monitors throughout the yard to better track the origin of sound emissions to improve operations. (The location map can be found in Exhibit A.) By internally keeping track of sound we will have a better understanding of where sound is emitted from on our yard. This information will help us identify ways to improve operations to reduce sound emissions. Completion time frame of July 1, 2019.

**Date Completed:** July 1, 2019

**Benefits:** Less noise

**Action:**

- Performed temporary sound monitoring for three weeks at ten locations

**Findings:**

- Noise levels were highest during the mandatory horn and load testing activities which occur throughout the day

**Response by Metrolink:**

- Requested quotes for permanent sound monitoring equipment installation to provide internal information and accountability for compliance with noise restriction policies.
  - Quotes for permanent sound monitors were requested on 8/8/19 and received on 9/12/19.

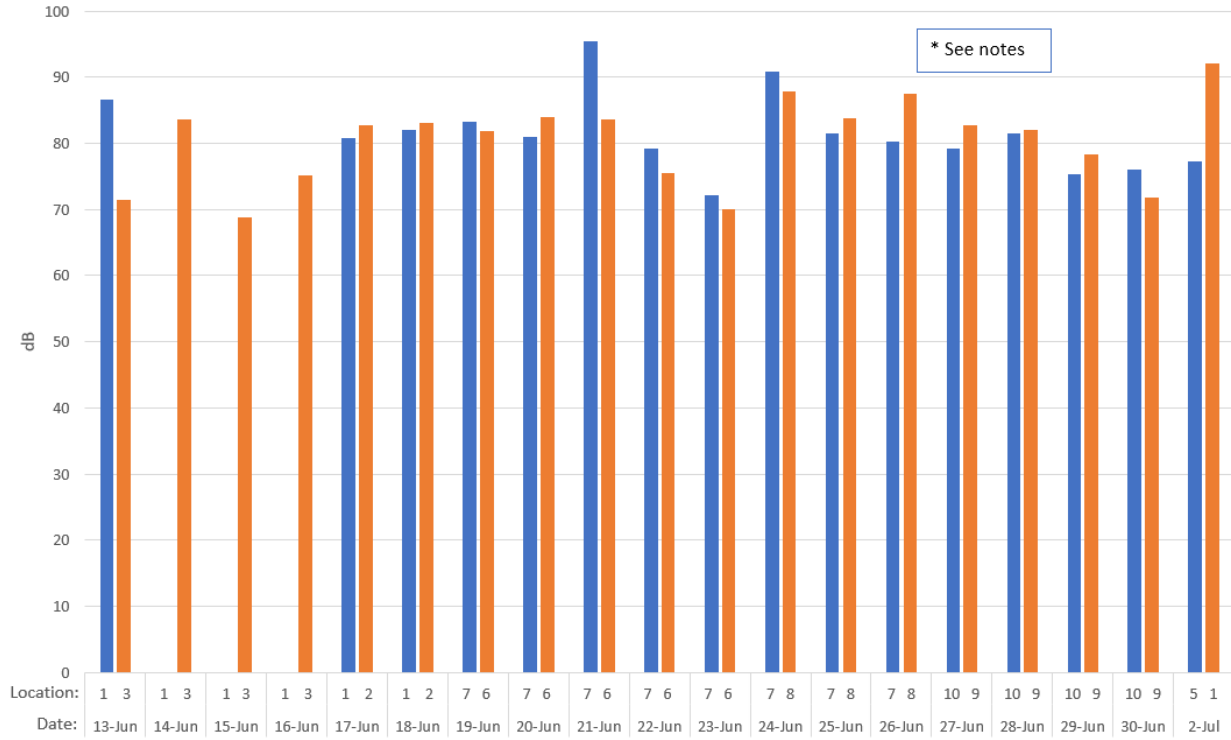
**Results:**

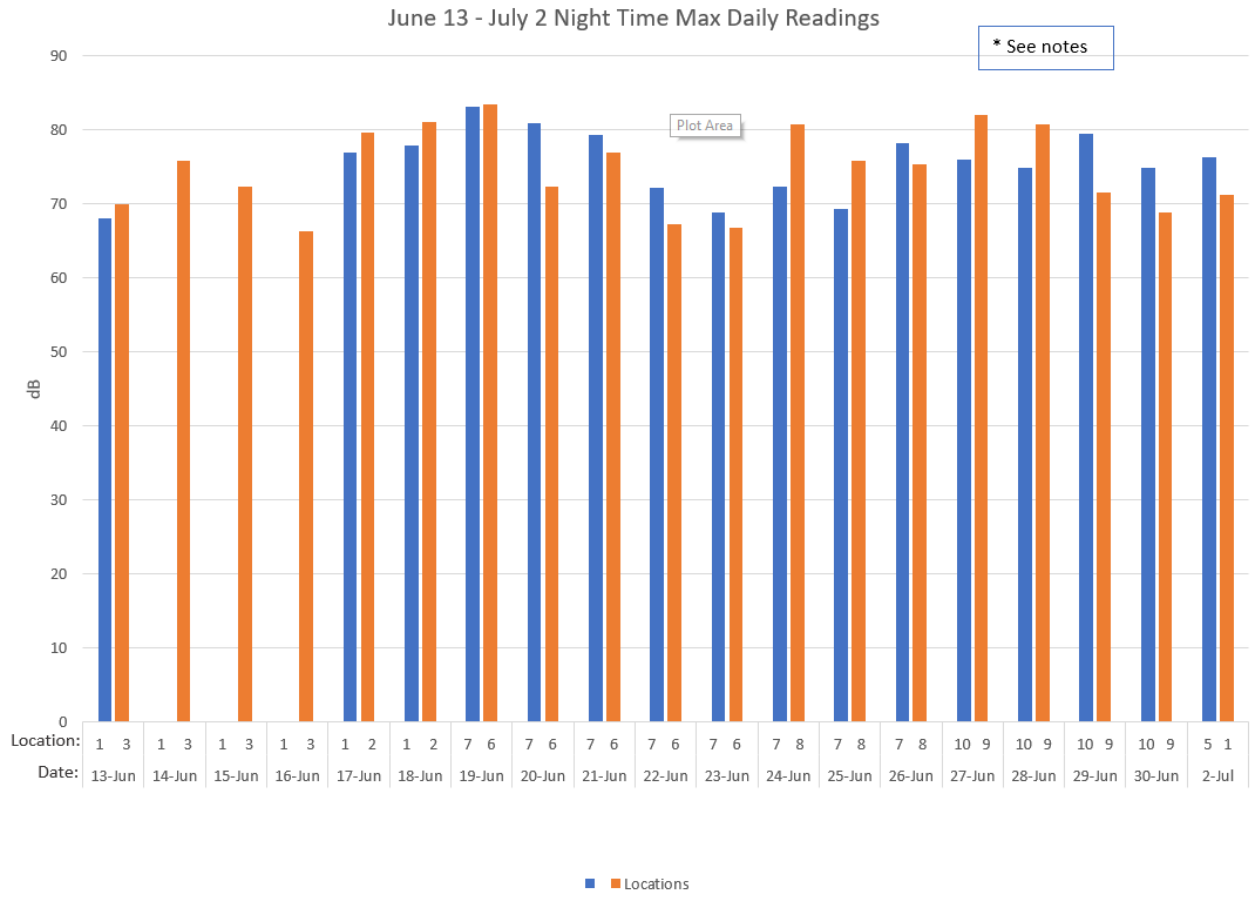
- Metrolink has better data on noise levels in the yard to support future mitigation efforts
- Metrolink plans to install permanent sound monitors to provide improved data and accountability for compliance with noise restriction policies
  - Funding was identified and pre-award authority on the project was approved on 10/15/19. Scope of work is written and will be send to contracts for procurement on 10/21/19

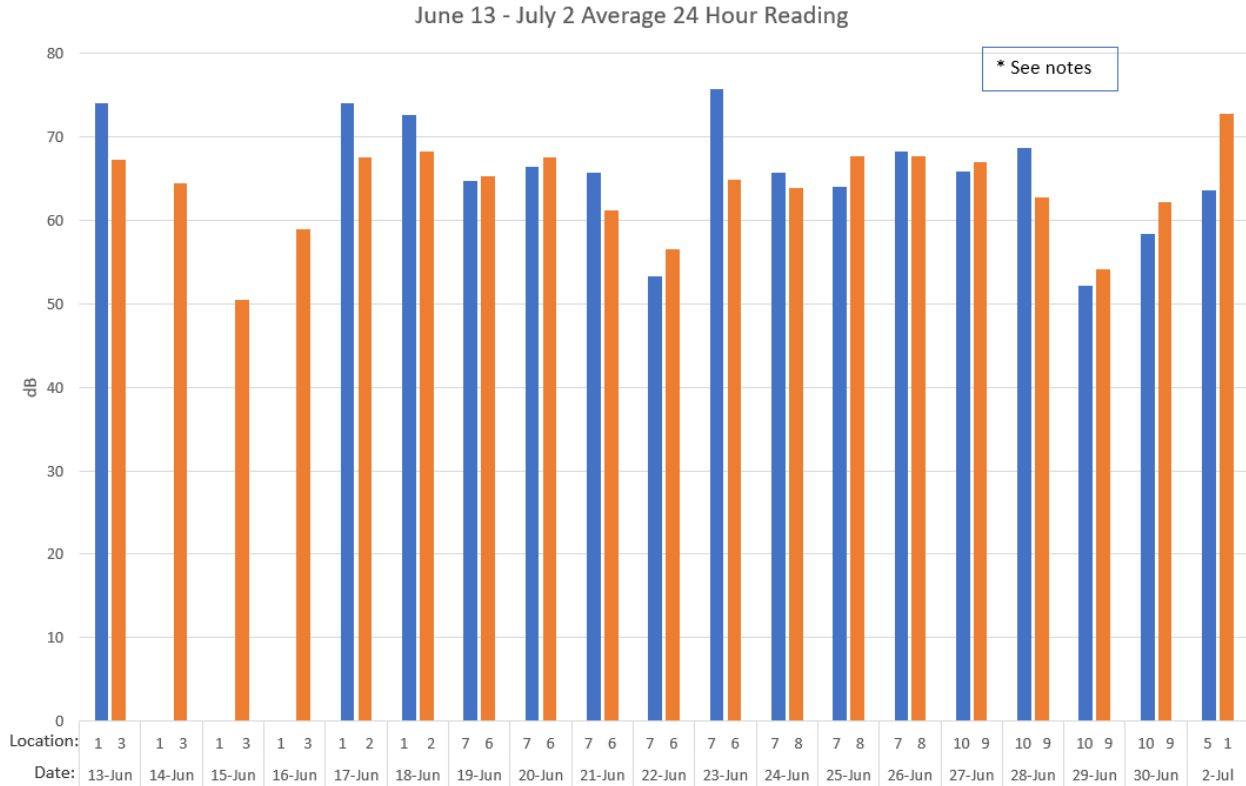
### Exhibit B

### Sound Monitor Results

June 13 - July 2 Day Time Max Daily Reading







\* Sound study decibel readings represent sound level inside yard limits and **not** the sound emanating outside of the CMF property or heard by neighbors. Sound was recorded on intervals of one-minute average and **not** comparable to the 15-minute average outlined by city ordinance.

### Sound Monitor Locations Maps







## Appendix C

### 5. Expedite 8 Tier 4 Locomotives into Service

**Description:** Metrolink has ordered 40 Tier 4 locomotives. As of initiation of this action plan on May 30, 2019, 23 locomotives had been delivered, with 15 of those units being deployed. Metrolink will expedite the deployment of the remaining eight Tier 4 units that have been delivered. Completion time frame of November 9, 2019.

**Date Completed:** August 22, 2019

**Benefits:** Cleaner air

**Action:**

- Metrolink has deployed Tier 4 locomotives each month since the Action Plan began in May 2019
- Eight new Tier 4 locomotives have been deployed, for a total of 23 locomotives in-service
- This goal was completed August 20, 2019 -- ahead of schedule

**Results:**

- Eight Tier 4 locomotives only emit 19.6 tons of NO<sub>x</sub> and particulate matter, while the eight decommissioned Tier O emitted 129.6 NO<sub>x</sub> and particulate matter per year
- 84.88% reduction in emissions per unit

Si necesita traducción en español por favor comuníquese con Sylvia Novoa al 213 452-0300 o [novoas@scrra.net](mailto:novoas@scrra.net).

## Appendix D

### 6. Add Accountability Metrics for the Equipment

**Description:** Metrolink is in the process of changing our approach on how we hire equipment maintenance contractors. Metrolink is enhancing our maintenance contract and adding accountability metrics as part of the new bundled contract. This new structure will bundle rail operations, maintenance, and support services to improve the customer experience and service reliability, while maintaining the agency's strong commitment to safety. Completion time frame of July 1, 2019.

**Date Completed:** July 1, 2019

**Benefits:** Cleaner air and less noise

**Action:**

- Metrolink staff included new accountability metrics pertaining to load testing, idling and movement of equipment in the yard as well as environmental stewardship and sand delivery as part of the new maintenance contracts which are being advertised

**Findings:**

- Insufficient contract requirements in existing contracts pertaining to neighborhood impacts

**Response by Metrolink:**

- Added requirements, as well as incentives and assessments, to address neighborhood impacts in the new maintenance contract which is in the procurement process (see Exhibit A)

**Results:**

- Added contract requirements, including "Good Neighbor" Standards and Practices (see Exhibit A)
- Added incentives for Innovation and Sustainability.
- Added assessments (monetary penalties of \$5,000 per instance) for failure to comply with the "Good Neighbor" Standards and Practices

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## Exhibit C

### METROLINK MAINTENANCE FACILITY OPERATIONS STANDARDS

#### “GOOD NEIGHBOR” STANDARDS & PRACTICES

This standard applies to any maintenance facilities located near residential neighborhoods. The Contractor shall schedule and perform all train and facility maintenance and repair activities to minimize the impact of noise and emissions on the surrounding community.

Work restrictions include, but are not limited to, the following:

- Locomotives should not be left to idle in the yard except when necessary for service or repair. Trains should be hooked up to ground power whenever possible (this applies to all SCRRA train service locations).
- Load testing should only be done in designated areas between the hours of 7:00 AM & 6:00 PM weekdays, and 10:00 AM & 1:00 PM on weekends.
- Contractor shall make every effort to schedule special train service and facility or track repairs to minimize community impact.
- Contractor shall not communicate directly with members of the adjacent communities. Contractor should coordinate communication through SCRRA Community Relations personnel.
- Contractor shall schedule sand deliveries on Saturdays after 10:00 AM.
- When performing night work, the Contractor shall disable back-up alarms on all utility trucks and equipment (Cal OSHA allows this when alarm is substituted with a spotter).

#### ENVIRONMENTAL STEWARDSHIP

- All waste generated must be separated as trash or recyclable (all SCRRA facilities).
- All trash and recyclable containers must be covered and not allowed to over flow (all SCRRA facilities).
- When receiving fuel or handling petroleum or other chemical products, all nearby storm drains must be covered.

#### SPECIFIC TO CENTRAL MAINTENANCE FACILITY

- Adhere to original MOU between Metrolink and the City of LA which requires that locomotives “will not idle at the site unless for the purpose of being serviced, and will not be moved at the site after 10 p.m. except for returning train sets destined for overnight storage at the facility or to initiate early morning service, thus noise at the CMF site will be reduced from former freight yard operating levels.”

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## Exhibit D

