



Central Maintenance Facility Community Update

February 27, 2021



METROLINK®

SMARTER. BETTER. ESSENTIAL.

Meeting Agenda



1. Welcome
2. Improvements at CMF
3. CMF Action Plan
4. CMF Action Plan Updates
 - Short-Term Goals
 - Mid-Term Goals
 - Long-Term Goals
5. Questions and Answers
6. Next Steps

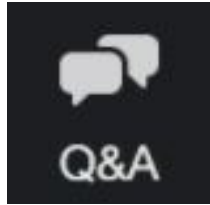
Welcome

- Spanish language translation is available / Traducción en Español disponible :
 - ID del seminario web: 820 0094 9775
 - Marcar 888-475-4499 (llamada gratuita) o 833-548-0276 (llamada gratuita)
- During the presentation all attendees will remain muted. Please hold all questions until the Q&A segments of the presentation.

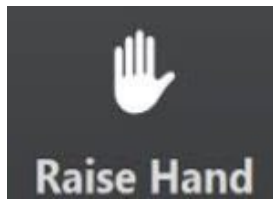


Questions and Answers

Facilitated by: Todd McIntyre, Chief Strategy Officer



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Improvements at CMF

- 39 out of 40 Tier 4 locomotives are received and in service.
- Communication improvements:
 - Equipment alarm text alerts to staff
 - Increased community noticing
- Facility improvements:
 - Permanent on and off-site sound monitor installation with public monitoring options
 - Fully optimized ground power stations -15 can be used at one time
 - Random independent inspections by Internal Audit
 - Semi-permanent sound barriers will be installed at service and inspection area
- Fleet improvements:
 - Renewable diesel demonstration



CMF Action Plan



- Metrolink's 11-point plan to be a better neighbor by reducing noise and emissions and to be more accountable to surrounding communities.
- Adopted May 2019
- Goals:
 - Short-term = 0 – 6 months
 - Mid-term = 6 – 18 months
 - Long-term = 18+ months
- All action plan updates can be found at metrolinktrains.com/cmf in the “community resources” section.



CMF Action Plan Update: Short-Term Goals

All short-term goals are completed. The completed short-term goals below:

- Optimized use of ground power stations
- Installed sound monitors
- Completed Internal Audit
- LA Metro completed independent new noise study
- Expedited 8 Tier 4 locomotives into service
- Changed the Accountability Metrics of the Equipment Maintenance Contractor

Goal 4: Independent New Noise Study (Led by LA Metro)

Benefits: Less noise

Progress :

- Metro completed the noise study and the draft report is available on MetroCMFStudy.com.

Next Steps:

- Visit MetroCMFStudy.com for background information and to see past meeting materials.

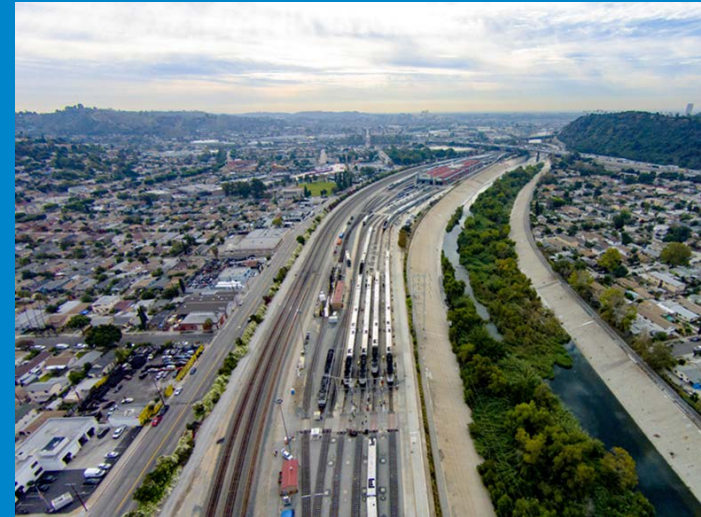
Contact:

Name: Brian Balderrama - Senior Director, Program

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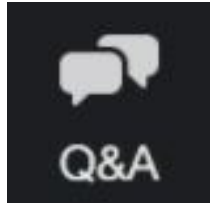
Email: balderramab@metro.net

Phone: (213) 418-3177

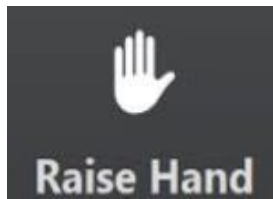


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CMF Action Plan Update: Mid-Term Goals

Mid-Term Goal (6-18 Months)	Status	Highlights
7) Fleet Modernization Study	73%	Staff continue to work with Member Agencies to explore options for the overhaul of the MP36 Tier 2 locomotive fleet. These options include a potential conversion to Tier 4 locomotives. Zero emissions and hybrid simulation work is wrapping up and a draft of the Alternative Propulsion findings have been circulated internally.
8) CMF Modernization Study	75%	Solutions have been identified to address community concerns and other needs and draft concepts are under development, including potential temporary noise mitigation options.
9) Complete deployment of 40 Tier 4 Locomotives	97%	39 of 40 locomotives have been deployed. Due to delays related to COVID-19, the 40th locomotive is projected to be delivered in Spring 2021.

Goal 7: Fleet Modernization Study

Benefits: Cleaner air and less noise

Progress:

- Study commenced March 2020
- Solutions have been identified

Findings:

- Findings included in the following slides

Next steps:

- Apply for grant funding opportunities to support these projects and effort
- Staff are working to launch a renewable diesel demonstration in early March



MP36 Locomotive Overhaul



Fleet size of
15



Tier 2
Locomotives



MP36 fleet
has operated
over 7.5
million miles



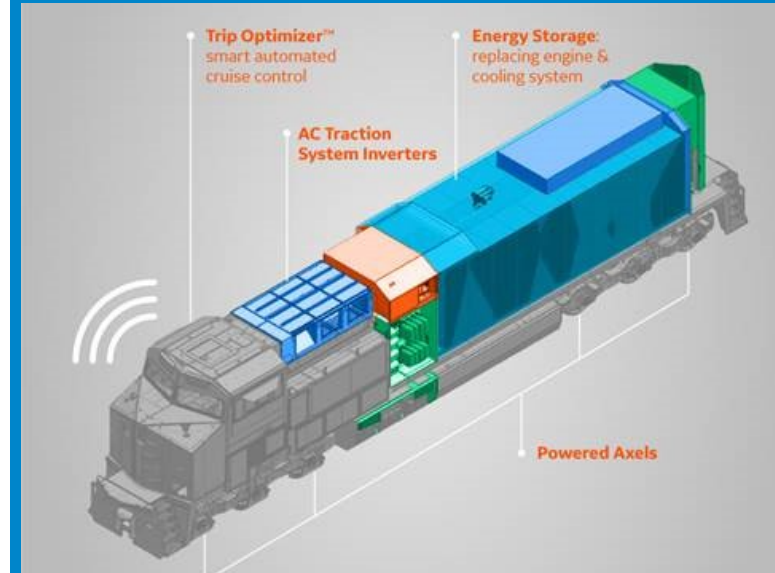
Workhorse
for SCRRRA
since 2008



Zero Emissions & Other Emissions Reduction Initiatives

Areas under study:

- Alternative Technology Comparisons
 - Battery Electric
 - Hydrogen Fuel Cell
 - Hybrid Solutions
- Transition Strategies
 - Convert decommissioned Tier 0 diesel locomotives for zero emissions/hybrid demonstration
- Renewable Diesel
- On-Board Systems





Goal 8: CMF Modernization Study

Benefits: Cleaner air and less noise

Progress:

- Study commenced February 2020

Findings:

- Projects under consideration to address community concerns are the following slides

Next steps:

- Staff are reviewing and working to finalize the draft Study report





Summary of Projects Under Consideration at CMF

Improvements to Address Community Concerns

- Install sound barriers at strategic areas along the property (service and inspection and along River Track near CMF building)
- Construct a load testing cell outside the locomotive shop
- Procure electric car mover

Operational Efficiency Improvements

- Improve ability to perform consist maintenance and reduce equipment movement in the yard
- Improve yard circulation and parking issues

Safety Improvements

- Install enhanced fall protection in shops and add additional rooftop access platforms

State of Good Repair Improvements

- Upgrade emergency power at the service and inspection area

Planning for the Future of Metrolink

- Identify improvements required to allow for battery charging and/or hydrogen fueling
- Install electric vehicle charging for non-revenue fleet vehicles
- Install solar panels on the roof of the CMF building

CMF Facility Layout



Proposed load testing building

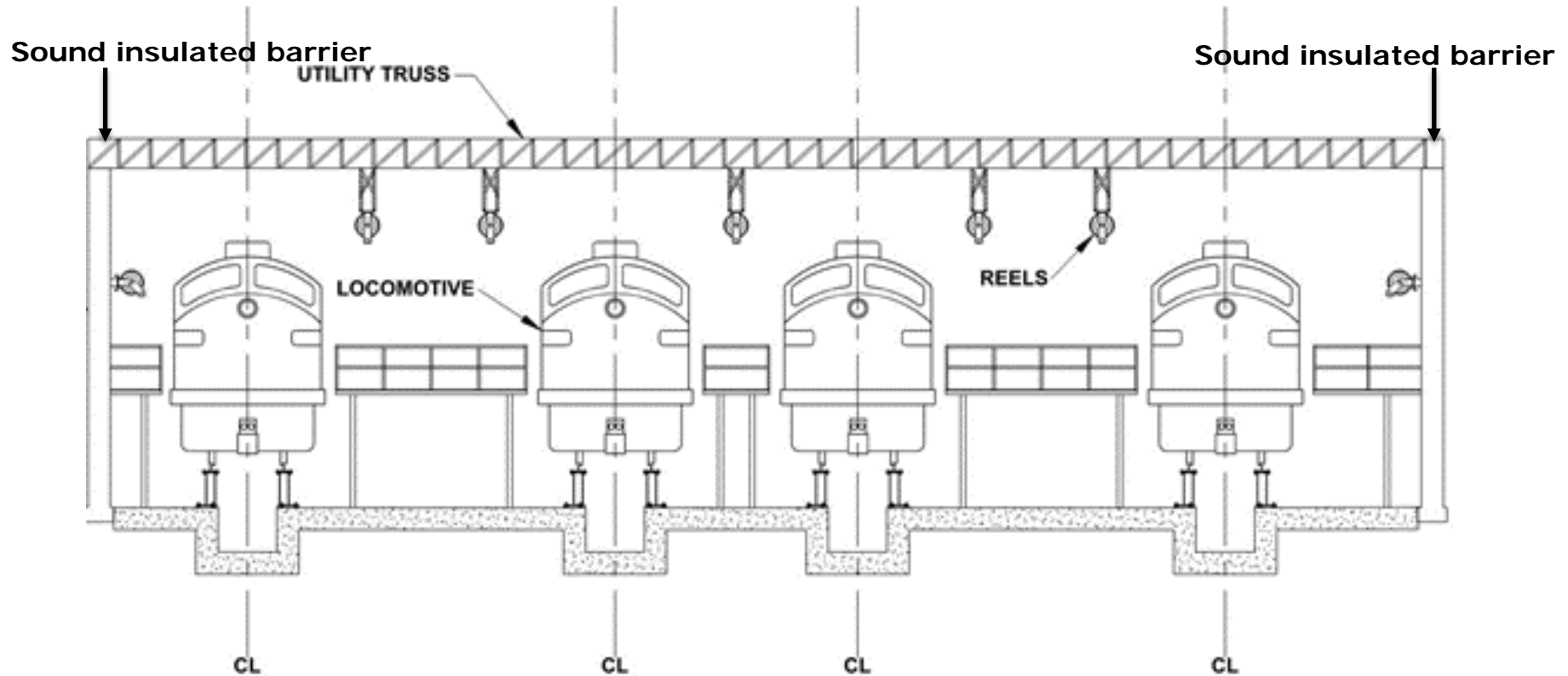
Proposed sound barrier

Elysian Valley Neighborhood

Proposed sound barriers

Cypress Park Neighborhood

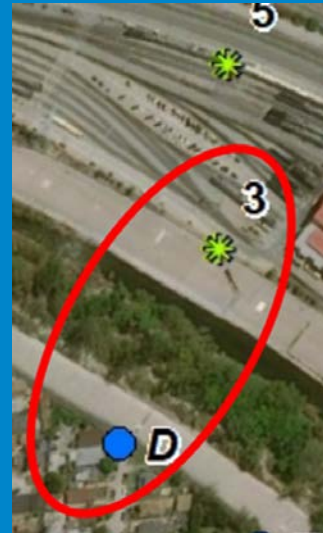
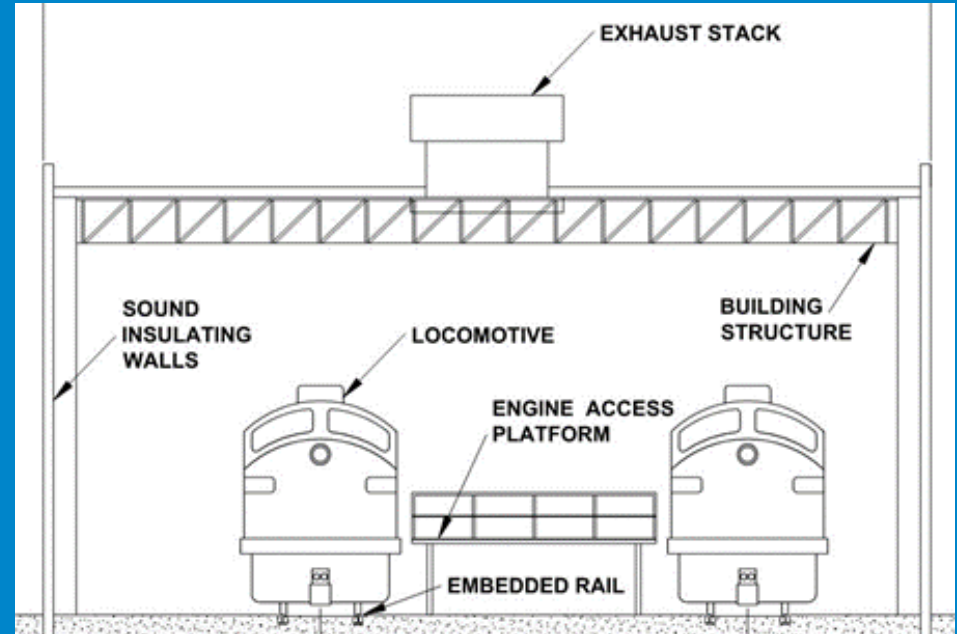
CMF Modernization Noise Mitigation



- Highlights include:
 - Sound barriers at service and inspection area
 - Sound barrier along the River Track and alongside the Progressive Maintenance Area

CMF Modernization Noise and Emissions Mitigation

- Preferred Option:
 - Load testing building outside the locomotive shop designed to provide emissions control technology to capture exhaust as well as sound insulating walls to reduce the community noise impacts



Goal 9: Complete deployment of 40 Tier 4 Locomotives

Benefits: Cleaner air

Progress:

- 39 locomotives have been deployed as of December 2020
- All legacy Tier 0 locomotives (30 total) decommissioned and removed from service
- Two Tier 2 locomotives have been decommissioned and removed from the yard

Findings:

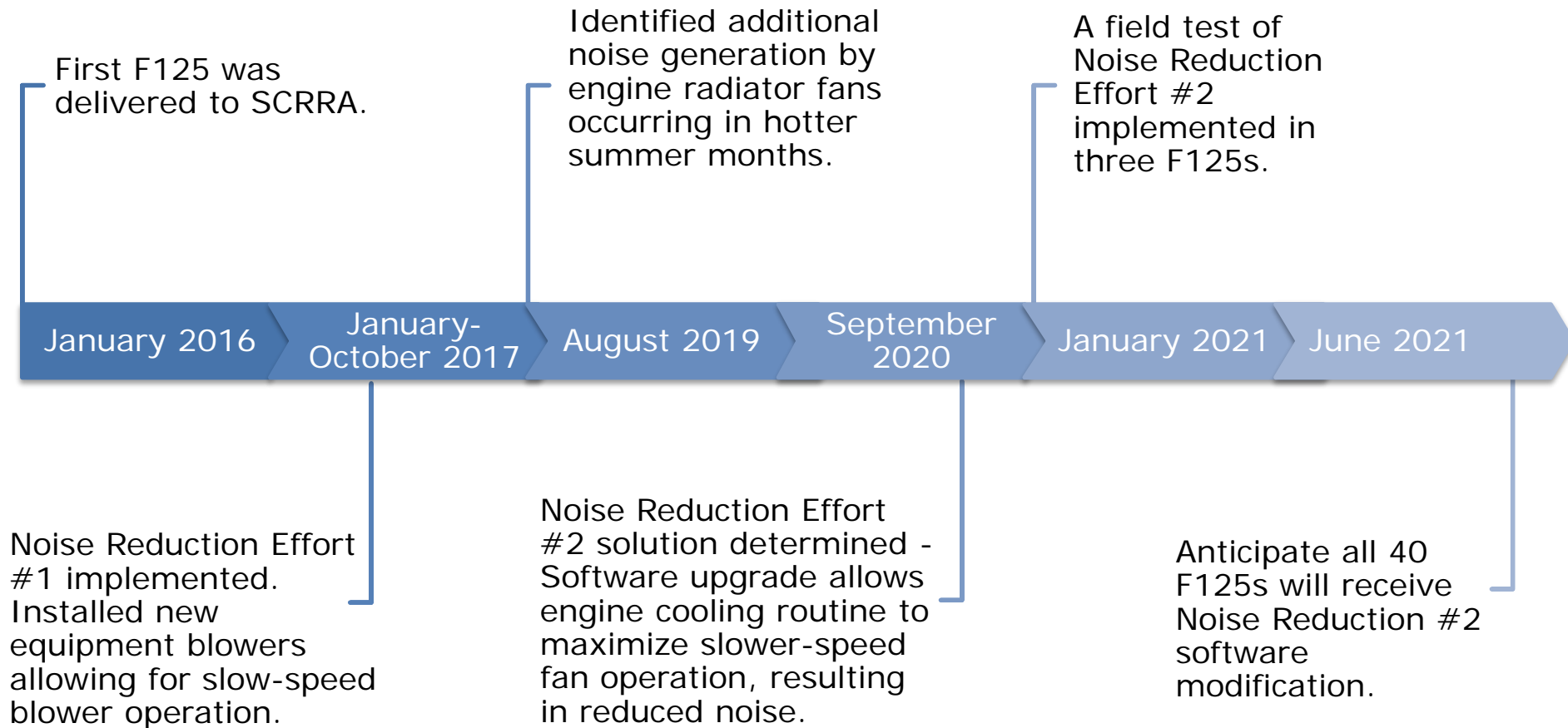
- On September 1, 2020, California Air Resources Board (CARB) certified that Tier 4 locomotives meet the required emissions standards after more than 100,000 service miles.

Next steps:

- Due to COVID-19 related material supply delays, the 40th locomotive is projected to be delivered in Spring 2021.



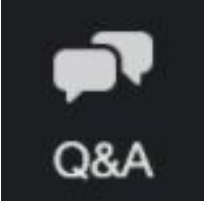


Tier 4 Noise Modifications



Note: During deployment of Noise Reduction Effort #2 to remaining fleet, Metrolink will continue to monitor the upgrade to ensure no detrimental impact to Tier 4 operation. Fans will still need to run at higher speeds at times, particularly on the hottest days.

Questions and Answers

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CMF Action Plan Update: Long-Term Goals

Long-term Goal (18+ months)	Status	Highlights
10) Work towards a Zero-Emissions Future	18%	<p>The findings in the Fleet Modernization study(action item 7) and Facility Modernization study (action item 8) will inform the projects and efforts of working towards a zero emissions future. These efforts are aligned with Metrolink's legislative program to seek funding and support to deploy zero emission rail propulsion demonstration and infrastructure across all service corridors. The Metrolink Fleet Management Plan Update will map out a systematic approach to the ongoing management and planning for the rehabilitation, replacement, and expansion of Metrolink's fleet of rail rolling stock and will identify zero/near zero emissions fleet types and facilities that can support service levels.</p>

Goal 10: Work towards a Zero-Emissions Future

Benefits: Cleaner air and less noise

Progress:

- SBCTA ZEMU trainset in the design phase
- Metrolink, in partnership with Metro, received a State grant to test new technologies on the Metrolink Antelope Valley Line.

Findings:

- Zero emissions locomotives are slowly emerging with demonstrations by BNSF and Pacific Harbor Line. More demonstration projects are needed.

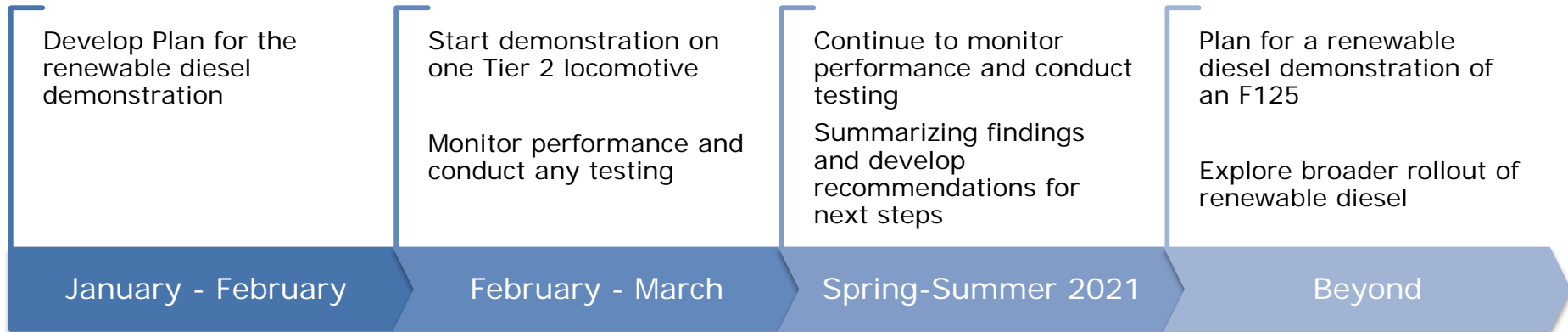
Next steps:

- Staff is advocating at the federal and state levels for funding to support demonstration projects.
- Staff are launching a renewable diesel demonstration.
- Staff are applying for US EPA Diesel Emissions Reduction Act (DERA) Funding for an electric car mover.



Renewable Diesel Demonstration

- Metrolink is initiating a renewable diesel demonstration for a single Tier 2 locomotive. If the pilot proves successful and Metrolink can transition the entire fleet to renewable diesel, Metrolink would be **100% fossil fuel free**.
- Renewable diesel is derived from renewable raw materials such as waste vegetable oils and animal fats and is refined in a similar manner to petroleum diesel.
- Emissions reduction impact according to CARB testing is stated as 10% NO_x, 10% CO, 5% HC and 30% PM. And up to 80% CO₂ depending on the feedstock source.



Performance



Reliability



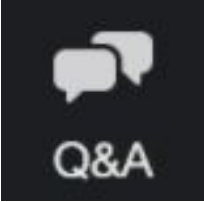


Fuel Consumption



Emissions

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Next Steps

How to Access the Virtual Meeting Room

We invite you to visit our CMF Virtual Meeting Room (VMR)

- Simply click on the link in the “chat” section of your screen
- Scan the QR code on the screen by using your phone or tablet device



- Or visit www.virtualeventroom.com/metrolink-cmf/


The CMF Virtual Meeting Room (VMR) will be live for 30 days. Materials will be available for viewing on the Metrolink Community website afterwards.



Thank You

Keep in Touch

Our next community meeting will be held in May 2021. Please keep in touch with us to receive all details as they come.

	<p>metrolinktrains.com/community To view past meeting materials, action plans, newsletters, and background information.</p>
	<p>24/7 Public Affairs Hotline: (213) 452-0400</p>
	<p>communityrelations@scrra.net, Sign up HERE to receive e-mail updates such as: construction/maintenance notices, action plans, newsletters, and upcoming meeting invites.</p>