

Industry and Community-Based Zero-Emission Drayage Supply Initiative

Regional Air Quality Planning Advisory, HGAC

June 30, 2022



Introduction

- Drayage Workgroup Objectives
- Review of Drayage Impacts
- Definition/Location of Potential Drayage “Hotspots”
- Community Standards for Management of Drayage Truck Traffic
- Infrastructure Investments
- Partnership Agreement

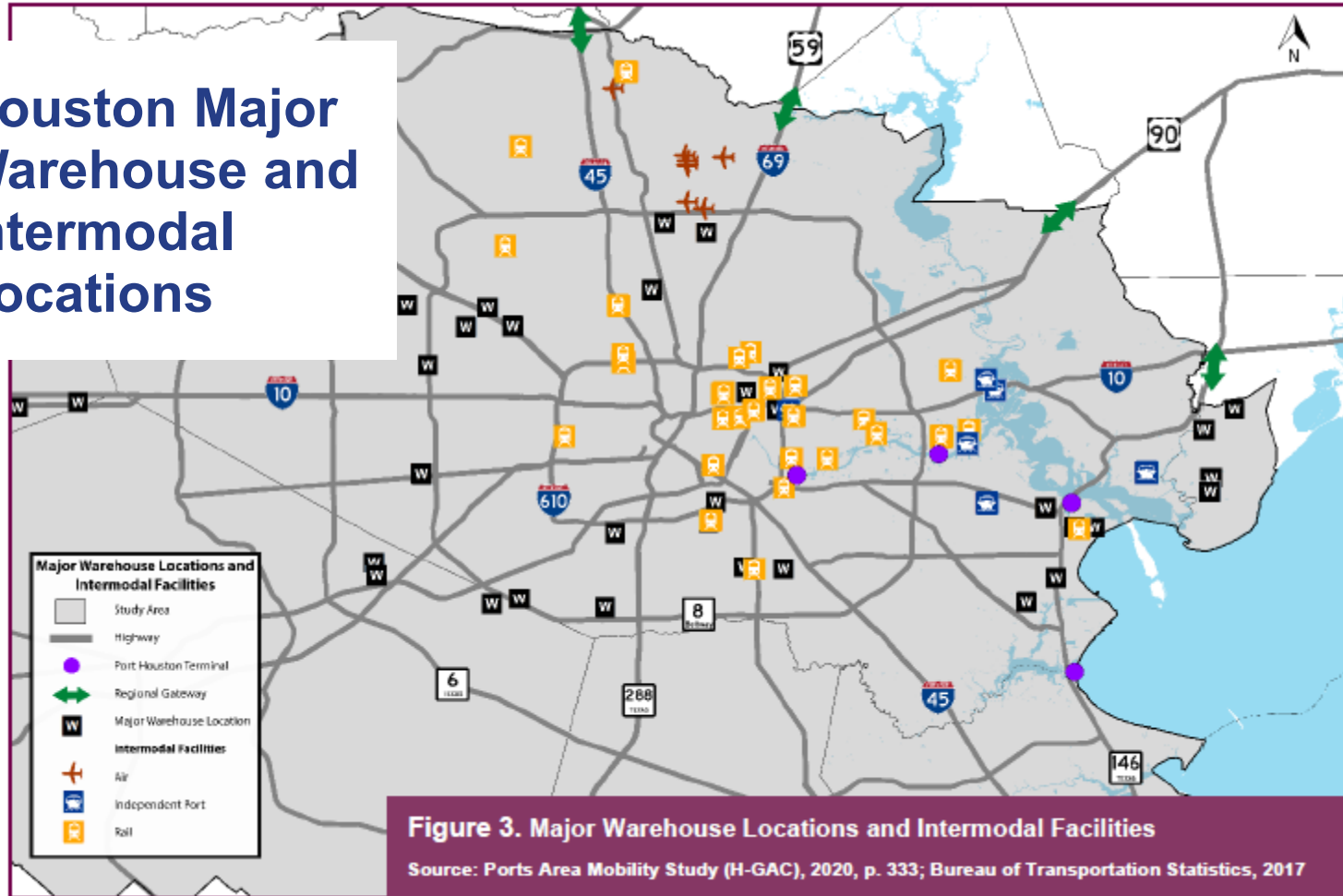
Membership and Summary of Objectives

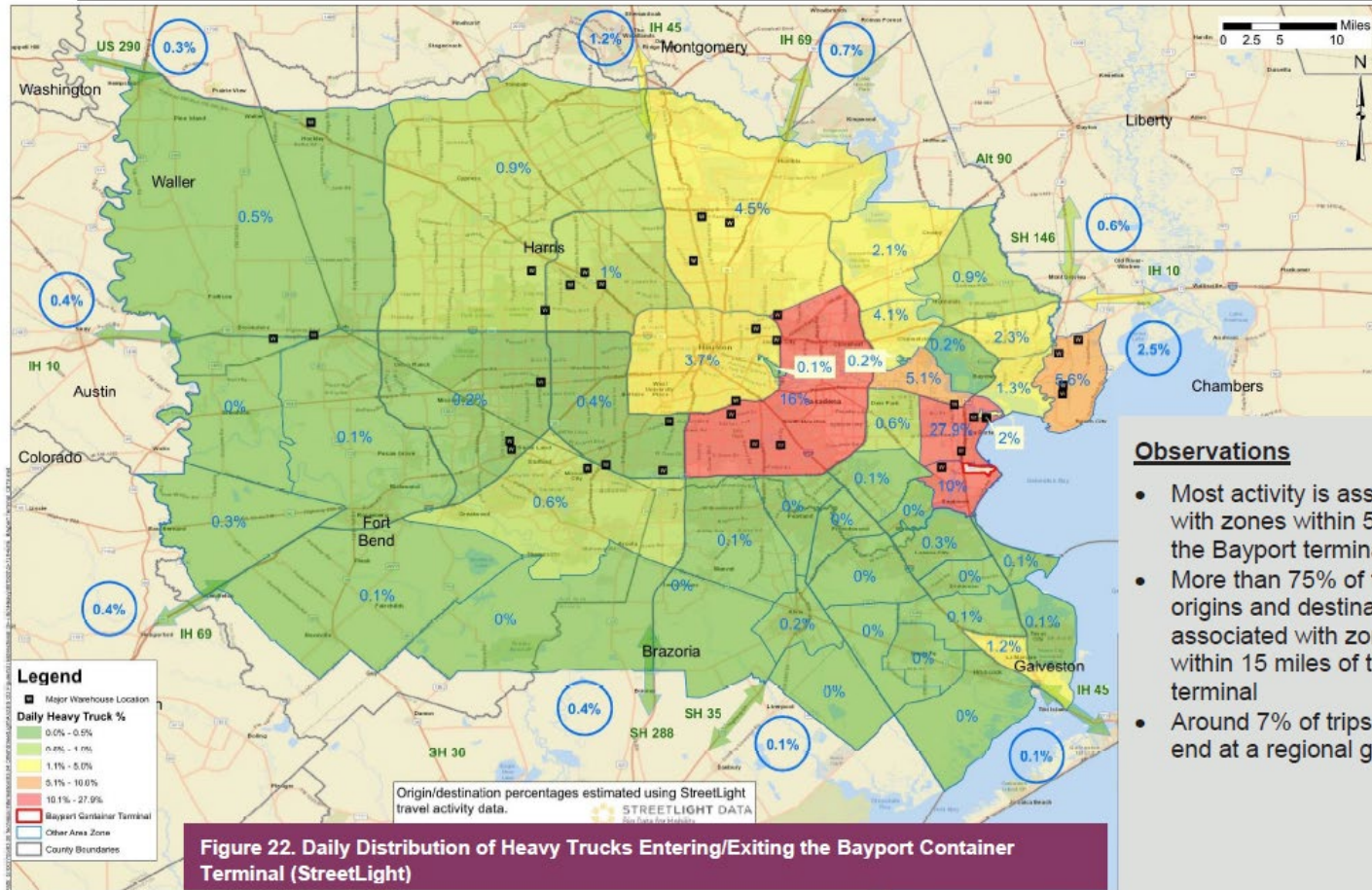
- Wal-Mart, IKEA, Anheuser, Maersk, CMA-CGM, Port Houston, Achieving Community Tasks Successfully, Public Citizen and Lone Star Legal Aid
- \$100 to \$250 million in Infrastructure, TCEQ and HGAC Funding
- Demonstrate Viability of ZEV Drayage Trucks
- Adopt 100% ZEV Drayage Truck Goal and Carbon Neutrality by 2050
- Geographic Pilots in “Hot Spot” EJ Neighborhoods
- Community Standards to Mitigate Truck Impacts

Accomplishments

- Port Houston's April 2, 2022, announcement to become carbon neutral by 2050.
- Port Houston's \$120 million DOT infrastructure grant application to support ZEV drayage trucks and an anti-idling campaign in EJ neighborhoods.
- The creation of the Heavy-Duty ZEV Workshop Steering Committee to plan the Fall 2022 heavy duty ZEV ride and drive event.
- Industry and community comments on TERP Funding

Houston Major Warehouse and Intermodal Locations

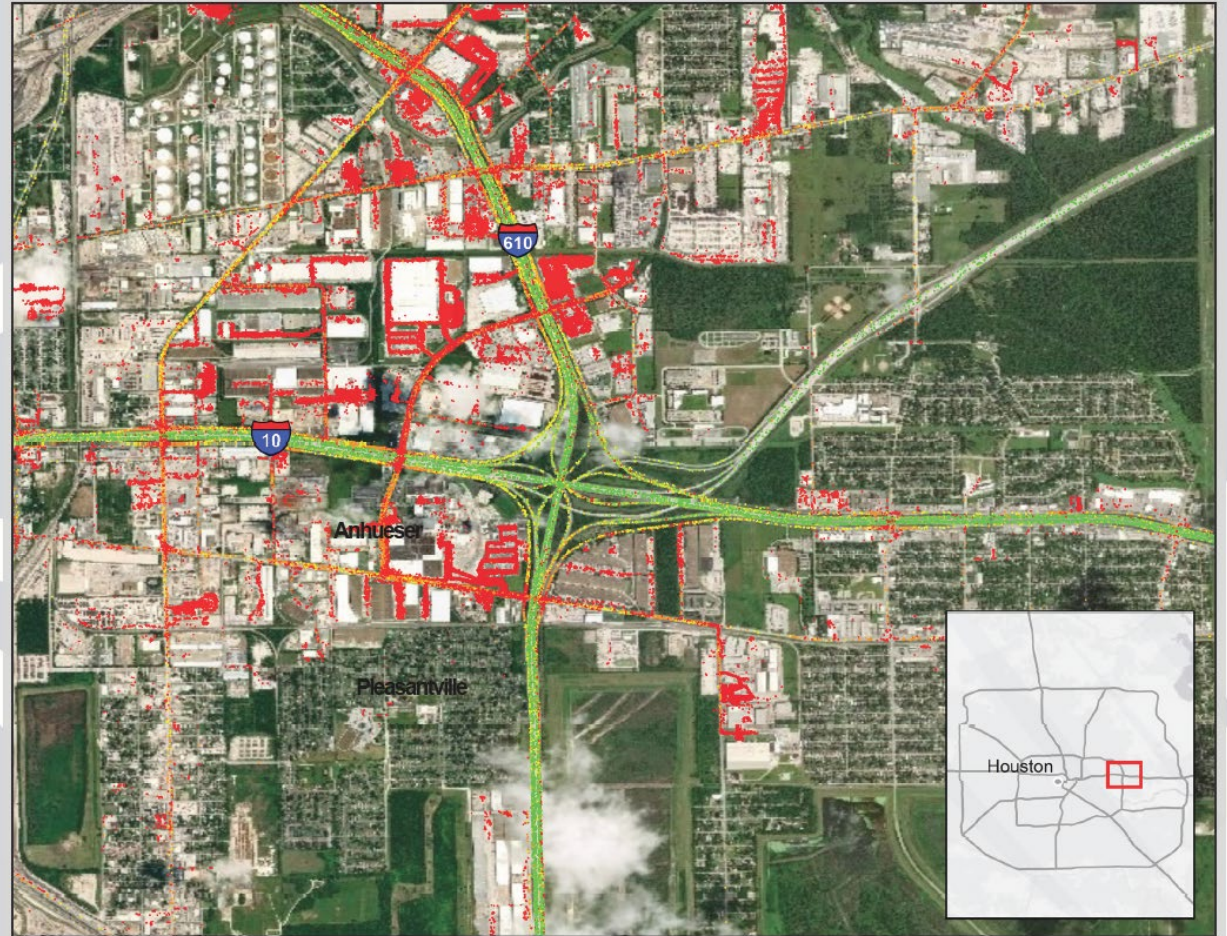




Observations

- Most activity is associated with zones within 5 miles of the Bayport terminal
- More than 75% of truck origins and destinations are associated with zones within 15 miles of the terminal
- Around 7% of trips start or end at a regional gateway

Daily Truck Traffic
<5mph in
Houston's
Pleasantville
neighborhood.
American Truck
Research Institute



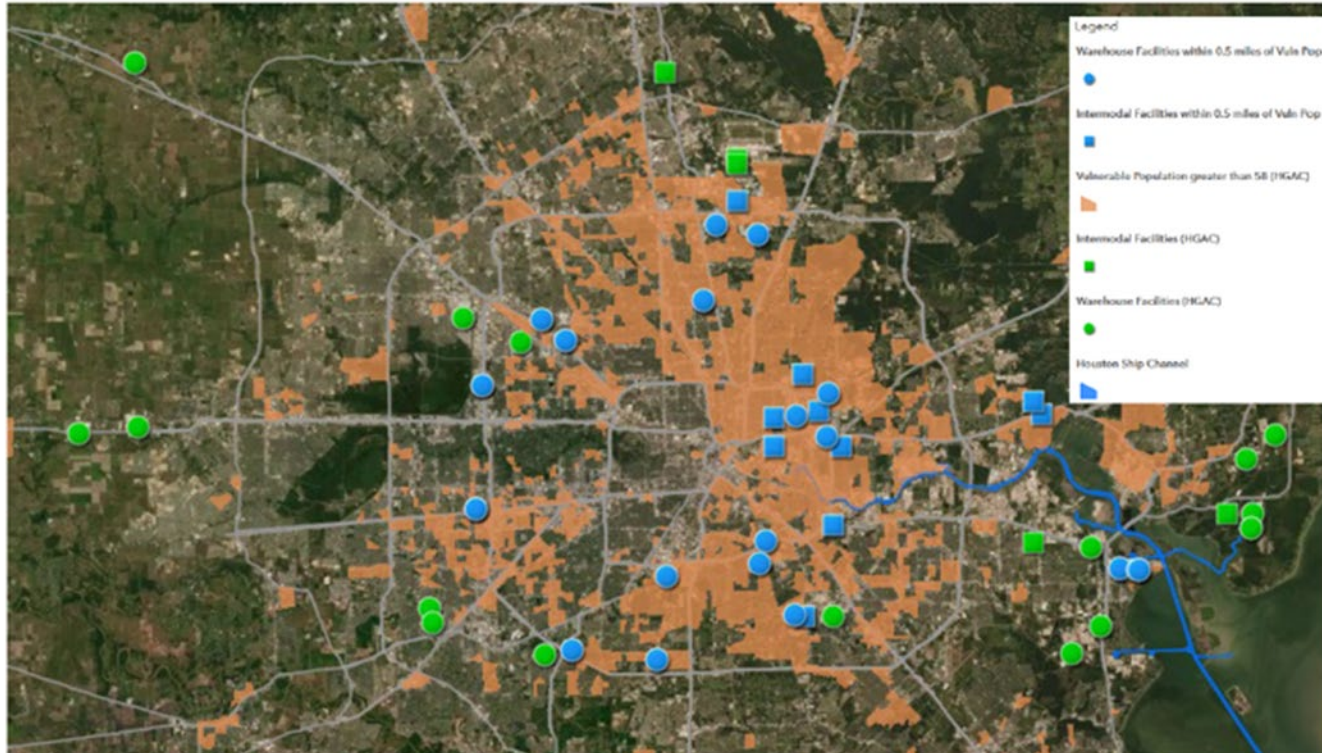
Trucks in Pleasantville



Drayage Truck Hotspots

- HGAC has identified 70 major warehouse and intermodal facilities that deliver >1000 containers per year to Port Houston
 - Safe, efficient, reliable and resilient operations are critical to Port Houston supply chain
 - Drayage trucks and yard tractors can create air quality, congestion and safety issues for residents in adjacent neighborhoods
- Designate 10 to 15 major warehouse locations for infrastructure and operation improvements
 - Volume of port traffic
 - Proximity to residential neighborhoods
 - Disadvantaged community status
 - Vulnerability to climate impacts, e.g., flooding

Major Warehouse and Intermodal Facilities Serving Port Houston and
Located in Vulnerable Population Areas as Defined by the Houston
Galveston Area Council (Preliminary Assessment)



Community Standards/Best Management Practices

- Effective **Anti-Idling and Truck Size and Weight** Neighborhood Ordinances*
- **Designated Truck Routes** with 7pm to 7am limitations near residential neighborhoods*
- Physical Barriers Including **Shrubs and Sound Walls** to buffer schools, neighborhoods, and other sensitive population groups.
- **Signalization and intersection** upgrades to reduce friction between heavy duty trucks and light duty vehicles
- **Smart truck routing** and scheduling systems*
- **Commercial vehicle monitoring systems** to evaluate program success, not for enforcement purposes.*

*From EPA's: [Drayage Truck Best Practices to Improve Air Quality](#)



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Drayage Truck Best Practices to Improve Air Quality

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This webpage is one in a [series of pages](#) that provide information on best practices at ports to reduce diesel pollution and associated health impacts. Select another topic from menu above to explore other sector best clean air practices.



Drayage trucks play an important role in port operations, the economy and air quality. Drayage trucks are generally diesel-fueled, heavy-duty (Class 8) trucks that transport containers and bulk freight between the port and intermodal rail facilities, distribution centers, and other near-port locations. This page describes best practices, listed below, that port authorities, drayage truck drivers, and other port operators can adopt to reduce dray truck emissions.

On this page:

- [Decrease the average age of the fleet](#)
- [Reduce idle and creep time](#)
- [Participate in the EPA SmartWay Program](#)
- [Consider complementary rail and marine operations](#)
- [Designate truck routes that avoid at-risk populations](#)

Infrastructure Investments

- HD ZEV trucks and charging infrastructure
- ZEV yard tractors and charging infrastructure
- Designated heavy duty truck parking facilities to reduce idling, support electric charging infrastructure and emergency preparedness
- Green jobs training program for the operation, maintenance and repair of medium and heavy-duty ZEV vehicles and charging infrastructure.

Funding for Infrastructure Investments

- Funding Sources
 - TERP: ~\$150 million per year
 - US DOT MEGA/INFRA: ~\$1.6 billion per year
 - US DOT PIDP (Port): ~\$225 million per year
 - US DOT RAISE: ~\$1.5 billion per year
 - US DOT Reduction of Truck Emissions: ~\$50 to \$80 million per year
 - Total = ~\$3.375 billion per year in DOT funds and \$150 million in State funds
 - Under Justice40, at least 40% of infrastructure investments benefit disadvantaged communities

Voluntary Partnership Agreement

- Advocate funding and policies for EV HD truck infrastructure and community standards in Houston
- Next Steps
 - Refine Workgroup objectives and goals
 - Clarify number and challenges at hotspot locations
 - Identify potential costs/budget
 - Engage trucking companies and warehouse owners/operators
 - Seek input/support from government officials

Thank you!

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Notable Milestones

- January 2020: *Ports Area Mobility Study*. Houston Galveston Area Council.
- March 2021: EDF Publishes *Clean Trucks, Clean Air, American Jobs*.
- October 2021: *Drayage Truck Electrification Feasibility and Benefit Analysis*. Texas Transportation Institute.
- November 2021: *Infrastructure Investment and Jobs Act*. >\$3.3 billion for freight/ZEV infrastructure.
- January 2022: *Medium and Heavy-Duty Electrification: Opportunities and Barriers*. Zero Emission Transportation Association.
- March 2022: Launch of Community and Industry Zero-Emission Drayage Workgroup
- April 2022: Port Houston announces plan to become carbon neutral by 2050
- April 2022: Launch of Houston Heavy Duty ZEV Workshop Steering Committee Meeting
- May 2022: Heavy-Duty ZEV Ride and Drive Event. NCTCOG
- May 2022: Port Houston applies for \$120 million DOT infrastructure grant for ZEV drayage trucks and anti-idling campaign

Vision Statement for Drayage Workgroup

Empowered environmental justice communities have access to and have the capacity to utilize political influence so that local, state, and federal agencies are dedicating sufficient resources to protect communities from drayage truck pollution, noise, and safety hazards through implementation of zero-emission drayage supply routes and community/industry drayage operating standards for major port and warehouse operations.