EPA's Response to the National Environmental Justice Advisory Council Report: Reducing Air Emissions Associated with Goods Movement: Working Toward Environmental Justice

U.S. Environmental Protection Agency

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Executive Summary

Purpose of this Report

The Environmental Protection Agency (EPA) is responding to the National Environmental Justice Advisory Committee (NEJAC) recommendations for reducing air emissions associated with goods movement. The NEJAC report contains 41 recommendations that fall into the following categories:

- Effective Community Involvement
- Health Research Gaps and Educational Needs
- Technology
- Regulatory and Enforcement Mechanisms
- Environmental Planning, Performance, and Management
- Land-use Planning and Environmental Review
- Resources, Incentives, and Financing

EPA's Response

EPA is grateful to NEJAC for a comprehensive set of recommendations that taken together provide EPA with a roadmap for improving and prioritizing goods movement programs at a time when resources are constrained across all levels of government. These recommendations have already influenced EPA's programs. For example, the recommendations informed EPA's Executive Management Council's[1] planning process resulting in the selection of two Agency goods movement goals that address several of the issues raised by NEJAC. The recommendations influenced EPA's 2010-12 Ports Air Quality Plan. They will be taken into consideration in future planning efforts to address air toxics and focus EPA's regulatory and nonregulatory programs to address goods movement sources. By targeting issues associated with goods movement and environmental justice, the NEJAC recommendations will help EPA improve its efforts to coordinate with communities and work together toward a clean environment for all.

EPA has aggressively developed regulations adopting emissions standards for new nonroad engines and vehicles and heavy duty highway vehicles used in freight operations. These standards continue to achieve large reductions in diesel particulate matter (PM) and nitrogen oxides (NOx) resulting in tremendous health benefits. It

[1] The former Environmental Justice Executive Management Council has become the EJ Standing Committee of the Executive Management Council.

is estimated that 217,000 cases of premature mortality will be reduced, and 16,870 hospital admissions and 2,600,000 lost work days will be avoided in 2030. However, diesel engines last a very long time. It takes many years for the in-use fleet to shift to the new cleaner engines required by EPA's standards and the need for reductions from the in-use fleet of diesel engines is urgent as NEJAC has pointed out. EPA has initiated two nonregulatory programs that address this issue: the National Clean Diesel Campaign (NCDC) and the SmartWay Transport Partnership Program. The NCDC along with the seven Regional Clean Diesel Collaboratives work with stakeholders to promote partnerships and provide funding to address the impacts of emissions from older engines at ports and rail yards, along rail lines and highways, and at warehouse and distribution centers. The SmartWay Transport program partners with shippers and carriers to reduce emissions throughout the supply chain. In addition, the Agency has funded many goods movement projects through EPA's community-based grant programs such as Community Action for a Renewed Environment (CARE). These programs reflect the NEJAC recommendations in formulating program actions. For example, NCDC's grant programs prioritize projects impacting environmental justice communities.

EPA works to integrate environmental justice concerns across all its programs. EPA understands the importance of working holistically, across multiple offices within the Agency, across all levels of US and tribal governments, and with stakeholders to solve environmental problems facing communities, whether those problems are from goods movement or other sources. Two such cross-cutting efforts will more comprehensively help address the air quality impacts of goods movement: EPA's Air Toxics Strategy (under development) and EPA's 2010-12 Ports Air Quality Plan.

Addressing the environmental impacts of goods movement on communities is a top priority for EPA. EPA appreciates and takes seriously the information presented in NEJAC's Goods Movement Report. The following summarizes EPA's responses and actions to NEJAC's recommendations. These are organized by themes drawn from the Goods Movement Report.

- <u>Effective Community Involvement</u>
    - EPA Administrator Lisa Jackson stresses the importance of engaging communities.
    - EPA will continue to evaluate how the current community-based goods movement grant programs are working.
    - EPA will explore simplifying/consolidating EPA's community-based grant programs.
    - EPA will expand community participation in EPA Regional Clean Diesel Collaboratives.

- EPA will improve Communications through establishing a community web portal, making goods movement materials more readily accessible and adding community members to EPA's federal advisory committees.

- Health Research Data Gaps

  - EPA is working with other federal partners to encourage cooperation on goods movement research; filling data gaps with the community toxics monitoring grants; studying near roadway exposure from PM and other pollutants.

  - EPA regions are in the process of creating an inventory of goods movement facilities located near environmental justice communities using Geographic Information Systems and other tools.

- Regulatory and Enforcement Mechanisms

  - EPA has made significant progress in regulating emissions from engines and vehicles used in freight operations and programs to accelerate reductions.

  - On March 26, 2010 the International Maritime Organization (IMO) approved the North American Emissions Control Area (ECA) which will reduce pollution from ocean going vessels. In 2020, emissions from ships operating in the ECA are expected to reduce NOx by 320,000 tons, PM2.5 by 90,000 tons and SOx by 920,000 tons annually.

  - EPA's heavy-duty truck standards completed phase-in in the 2010 model year and reduce per-vehicle PM and NOx emissions by over 90% from previous standards.

  - EPA adopted new standards for Category 3 marine diesel engines. Near term standards apply beginning in 2011 and will reduce NOx by 15-25%. Long term standards apply in 2016 and will reduce NOx on new vessels by 80% below today's levels and also reduce PM by 85%.

  - EPA's new locomotive standards will take effect in 2011 and 2015 and will require new locomotives to be 90% cleaner than today's cleanest locomotive engines.

  - The National Clean Diesel Campaign (NCDC) and the SmartWay Programs will continue to provide incentives for accelerating fleet turn over.

  - The 2010-2012 Ports Air Quality Plan contains specific commitments for actions to address emissions from port operations.

  - EPA's draft transportation conformity guidance for quantitative hot-spot analyses provides a method for quantitatively assessing the local impacts of transportation projects.

- Land-use Planning and Environmental Review
    - EPA doesn't have authority under the Clean Air Act (CAA) to regulate land-use but it does have programs/requirements such as transportation conformity, air quality plans and environmental review which can influence land-use decisions.
    - EPA has developed internal guidance for considering diesel emissions in reviews under the National Environmental Policy Act (NEPA).
    - EPA is reviewing existing land-use related guidance to determine if it warrants updating.
    - EPA is working on sensitive receptor guidance for schools that will include transportation impacts.
- Technology
    - EPA understands the need for new technologies to address diesel emissions and the need for incentives to develop them.
    - EPA allows the reductions from voluntary diesel reduction strategies to be included in State air quality plans.
    - EPA's Emerging Technology and Verification Programs will continue to make new technologies available for reducing emissions from freight operations.
    - EPA has initiated several collaborative research efforts to develop new technology; including one at the Ports of New York and New Jersey introducing a hydraulic hybrid technology on a yard hostler and the Clean Technology Initiative in California.
- Environmental Performance, Planning and Management
    - EPA plays a key role in providing tools to estimate and measure emissions and environmental performance, and continues to improve its suite of models for doing so.
    - EPA will continue to promote Environmental Management Systems through its SmartWay and Clean Ports USA Programs.
- Resources, Incentives and Funding
    - EPA agrees there is not enough funding to completely update the existing diesel fleet but has achieved significant success in leveraging federal resources.
    - EPA will encourage eligible communities to submit applications for Clean Diesel Grants.
    - EPA will build on the success of the Tribal Diesel Emissions Reduction Grants.

- SmartWay Finance Grants will continue to provide low interest loans as recommended by EPA's Environmental Finance Advisory Board and NEJAC.
- EPA will encourage additional diesel Supplemental Enforcement Projects (SEPs) and is looking for project suggestions.
- EPA will continue to partner with other federal agencies such as Department of Transportation (DOT) to use other federal agency funds such as Congestion Mitigation and Air Quality (CMAQ) Funding and the Sustainable Community Challenge grants to reduce the impacts of freight operations on all communities.

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Introduction

The NEJAC Report and EPA's Response Process

In November 2009, EPA's National Environmental Justice Advisory Council (NEJAC)[2] transmitted its report, *"Reducing Air Emissions Associated with Goods Movement: Working Toward Environmental Justice*[3]*"* to the Administrator. This report represented the culmination of several years of work by the NEJAC's Goods Movement Work Group.

Specifically, this group was charged with "*providing advice and recommendations about how the Agency can most effectively promote strategies, in partnership with federal, state, tribal and local government agencies and other stakeholders to identify, mitigate, and/or prevent the disproportionate burden on communities of air pollution resulting from goods movement".*

The NEJAC Recommendations

For the purposes of its report, NEJAC defined goods movement as *"distribution of freight (including raw materials, parts and finished products) by all means of transportation including marine, air, rail, and truck. Goods movement facilities include seaports, airports and land ports of entry (border crossings), rail yards, and rail lines, highways, and highway truck traffic roads, and warehouse and distribution centers*". NEJAC's report contains 41 recommendations (see Appendix A) that fall into the following categories that broadly address the challenges faced by goods movement communities:

- Effective Community Involvement
- Health Research Gaps and Educational Needs
- Technology
- Regulatory and Enforcement Mechanisms
- Environmental Planning, Performance, and Management
- Land-use Planning and Environmental Review
- Resources, Incentives, and Financing

[2] NEJAC is a federal advisory committee chartered pursuant to the Federal Advisory Committee Act (FACA) to provide advice to the Administrator of EPA. Environmental Justice is defined as the "fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies.

[3] The full report can be found at www.epa.gov/NEJAC.

EPA's Process for Responding to the Recommendations

At the January 2010 NEJAC meeting, Senior EPA managers and appointees met with NEJAC and proposed a response process and timeline for responding by the summer, 2010 NEJAC meeting. In recognition of the breadth of the recommendations in the report, EPA convened a cross agency team, *The NEJAC Goods Movement Response Team (the Response Team)*, made up of senior EPA staff from the Office of Air and Radiation (OAR) including its Offices of Transportation and Air Quality (OTAQ) and Air Quality Planning and Standards (OAQPS); the Office of Enforcement and Compliance Assurance (OECA) including its offices of Civil Enforcement (OEC), Federal Activities (OFA) and Environmental Justice (OEJ); the Office of Research and Development (ORD), the Office of Policy Economics and Innovation (OPEI), and Regions 9 and 10.

The charge to this team was to consider the recommendations and to respond as fully as possible considering EPA's authorities and resources, recognizing the serious resource constraints facing the Agency. The Team was co-led by OAR/OTAQ and Regions 9 and 10. Regions 9 and 10 serve as EPA regional leads for environmental justice and mobile sources (Region 9) and as the overall regional lead for air (Region 10). In their lead regional capacity, Regions 9 and 10 solicited input from all of EPA's regions in considering the recommendations. Each team member was responsible for convening others with the specific expertise needed to fully consider the recommendations and to coordinate with other offices and agencies as needed.

The Response Team first inventoried EPA actions and programs to determine what EPA is already doing to address the NEJAC recommendations and what more the Agency can do. In many cases, the inventory showed that environmental justice concerns are being successfully integrated into many of EPA's programs designed to prevent or mitigate the negative impacts of goods movement on communities. The inventory was helpful in identifying gaps and additional actions EPA could take to respond to specific recommendations. In some cases, the Response Team convened sub-teams to consider various recommendations. At the end of the process, well over 100 EPA staff, all regional offices, and Offices not on the official Response Team, including the Office of Water and the Office of Solid Waste and Emergency Response, were involved in developing the responses to NEJAC's recommendations contained in this report.

Section 1:
History of Goods Movement Activities and Overview of EPA's Response

Past EPA Efforts to Reduce In-use Diesel Emissions

Since 1990, EPA developed a comprehensive set of regulations for new engines used in freight operations, including those used in marine, rail, and trucking. It has also developed non-regulatory programs to address emissions from older engines that are not addressed through these rules.

The explosive growth in commerce in the late 1990's through the early part of this decade exacerbated the air quality issues in goods movement communities. Prior to the economic downturn, the US Department of Transportation projected that total goods movement would increase by more than 50 percent by 2020 (from 1998 levels). Over the same time period international container traffic was projected to double. EPA and others began to realize that regulations alone would not bring the immediate relief needed to communities near ports, rail yards, distribution centers, and along freight corridors. The Natural Resources Defense Council and the Coalition for Clean Air issued their report, "Harboring Pollution: Strategies to Clean Up U.S. Ports," in August 2004. The Los Angeles "No Net Increase"/Air Quality Task Force delivered its "No Net Increase" Air Quality plan for returning and holding Port of Los Angeles-related air emissions to 2001 levels.

EPA took several actions:

- In 2004, EPA formed a Clean Diesel Work Group under the Mobile Source Technical Review Subcommittee of the Clean Air Act Advisory Council.[4] The Clean Diesel Work Group was charged with identifying incentives for cleaning up the existing diesel fleet primarily in 4 sectors; Ports, Freight (trucks and rail), School Buses and Construction.[5]

- EPA formed the National Clean Diesel Campaign (NCDC) and seven EPA Regional Clean Diesel Collaboratives and the SmartWay Transport Program. In doing so, EPA formally recognized the

[4]CAAAC is a federal advisory committee chartered pursuant to the Federal Advisory Committee Act (FACA) to provide advice to the Administrator of EPA.
[5] The recommendations of the Clean Diesel Work Group are contained in the 2006 report, "Recommendations for Reducing Emissions from the Legacy Diesel Fleet" April 2006, a report from the Clean Air Act Advisory Committee.

connection between its voluntary and regulatory diesel programs and the efficacy of partnering with stakeholders to address diesel pollution.

- In 2005, EPA created the Clean Ports USA Program under NCDC. Clean Ports USA works with port authorities, their business partners, and other stakeholders to reduce air pollution for port operations. Marine ports play a critical role in the goods movement system. They are the gateways to foreign trade and are transportation hubs that bring together the various modes of transport and, correspondingly, concentrate emissions and damage air quality especially in the port communities. There are 126 public port authorities in the nation that have jurisdiction over 185 public ports. Focusing on ports provides an opportunity to reduce significant sources of pollution, influencing many different modes of transportation and resonating throughout the entire goods movement system.

- EPA convened its senior leaders at the Port of Los Angeles in 2006 and again at the ports of New York and New Jersey in 2007, to discuss the environmental impacts of ports and port operations. As a result of these meetings the Agency created the Strategy for Sustainable Ports which was conceived as a multi-media set of actions that EPA offices and Regions could take to address the environmental impacts on port communities. The air related elements of that strategy have since been updated to create the 2010-12 Ports' Air Quality Plan. The Agency's senior leaders recently met at the Port of Baltimore to discuss future multimedia efforts to reduce pollution at ports and along the entire supply chain.

- EPA put in place more stringent standards for heavy duty trucks and engines used in locomotives and marine applications.

- EPA asked NEJAC for recommendations on how to more effectively reduce the impacts of goods movement on communities.

The following addresses the Agency's response to the recommendations from the NEJAC on Goods Movement.

EPA's General Response to NEJAC's Goods Movement Recommendations

While EPA has invested and will continue to invest significant resources to reduce diesel emissions, it is now at a point of targeting future actions to build on the regulations and past efforts. At a time when resources are constrained across all level of government, the NEJAC recommendations are particularly helpful in formulating future Agency work.

The NEJAC report contains a comprehensive set of recommendations that taken together provide EPA with a roadmap for improving and prioritizing programs. For example, the recommendations informed EPA's Executive

Management Council planning process resulting in the selection of two Agency goods movement goals that address several of the issues raised by NEJAC. The recommendations influenced EPA's 2010-12 Ports Air Quality Plan and will be taken into consideration in future planning efforts to address air toxics. These efforts are discussed in more detail in the body of this response.

Beyond rulemaking alone, EPA Administrator Lisa P. Jackson stresses the importance of building strong relationships with overburdened and economically distressed cities and towns. Addressing the environmental impacts of goods movement on communities is a top priority for EPA and the NEJAC recommendations provide valuable insights for the Agency.

Although NEJAC was charged with providing recommendations related to the air quality impact of goods movement, EPA recognizes that many of the recommendations address how the Agency can more effectively engage communities in doing its work. This is true whether communities are dealing with the air quality impacts of goods movement, waste disposal or water quality.

EPA is working more holistically across the Agency to coordinate programs to address issues that are environmentally important to communities. Air toxics is one such issue. As the NEJAC report points out, minority, low income, and indigenous populations have borne a disproportionate share of the cumulative air toxics health impacts from goods movement. However, transportation sources are not the only sources of air toxics. There are multiple sources such as chemical plants, refineries and iron and steel plants. Rather than address air toxics from goods movement separately from the other sources, EPA is in the process of developing a comprehensive strategy to address air toxics. It will take advantage of all the tools the agency has, both regulatory and nonregulatory, to reduce exposure to air toxics in our communities. EPA will carry out this strategy in cooperation with all EPA offices, other federal agencies, states, tribes, local health agencies and communities.

EPA's senior leaders from headquarters and the regions met in July 2010 to discuss the environmental implications of goods movement operations on our nation's air, land, and water. One purpose of this meeting was to discuss the Agency's 2010-12 Ports Air Quality Plan and expand and revise the multimedia Strategy for Sustainable Ports to more broadly consider goods movement. Appendix B contains the 2010-12 Ports Air Quality Plan and Section 4 discusses it in more detail. The Ports Plan contains specific detailed actions and commitments on the part of OAR and EPA's Regions that directly address many of the NEJAC's recommendations and serves as a cornerstone of our response.

EPA realizes that cooperation across the Agency and with our federal, state, tribal, community, and industry partners is critical to preventing and mitigating the negative impacts of goods movement on communities. EPA is committed to working cooperatively with this cross section of partners, with an emphasis on working with communities to address the environmental consequences of the goods movement system.

EPA appreciates and takes seriously the information presented in NEJAC's Goods Movement Report. These recommendations will help us better integrate environmental justice into Agency existing programs and into future planning.

Organization of EPA's Response to Goods Movement Recommendations

This report contains the Agency's response organized by the 7 themes in the NEJAC's Goods Movement Report listed. Each theme has a separate section beginning with Section 2.

Section 1: Overview of EPA's Response
Section 2: Effective Community Involvement
Section 3: Health Research and Data Gaps
Section 4: Regulatory and Enforcement Mechanisms
Section 5: Technology
Section 6: Environmental Planning Performance and Management
Section 7: Land-use Planning and Environmental Review
Section 8: Resources, Incentives, and Financing
Appendix A: NEJAC Recommendations
Appendix B: 2010-12 Ports Air Quality Plan
Appendix C: DERA Grants
Appendix D: Acronyms

The numbers of the recommendations addressed in each section are listed at the beginning of the section. Appendix A contains the full text of the NEJAC recommendations. Appendix D contains a list of acronyms for the reader's reference.

Section 2
Effective Community Involvement

Federal requirements exist for seeking public input in air quality and transportation planning. In addition, there have been multiple efforts recently to engage community members in local planning efforts such as at the ports of New York, New Jersey, Seattle, Portland, Los Angeles and Long Beach. However, these public participation processes can always be expanded and improved.

The NEJAC report recommends improving the traditional public participation mechanisms and procedures required by law, as well as strategies that go beyond the requirements of the Clean Air Act or DOT's Metropolitan Planning Guidelines to empower communities most directly affected by goods movement.

The NEJAC recommends that the Agency review its procedures for public participation and promote a "shift toward community-based approaches to capacity building, funding and collaborative problem solving".[6] Their report describes two models of community based approaches: Community Facilitated Strategies and Collaborative Governance. Community Facilitated Strategies is a model that recognizes the differences between communities by funding the community leaders to design stakeholder processes to prioritize environmental issues in their communities. Under the Community Facilitated Strategies model, funding would be made available to ensure that the participants selected by the community leaders have access to independent technical and scientific expertise necessary to evaluate and mitigate the impacts of goods movement facilities. The second model suggested, Collaborative Governance, is complementary to the Community Facilitated Strategies model. Collaborative Governance is a collaborative decision making process involving multiple stakeholders typically convened by the executive branch of government.

To consider these recommendations, EPA convened a sub-team of people across the Agency with experience in community engagement. This group reviewed EPA's existing community-based goods movement projects as well as community capacity building grants. In addition, the broader Response Team identified other opportunities for community engagement through EPA Regional Clean Diesel Collaboratives and improved communications.

Community Facilitated Strategies and Collaborative Governance
(Response to Recommendations 1-6)

EPA agrees that emphasizing community empowerment and promoting community decision making is key to resolving the environmental problems communities face. EPA believes that the ideas embodied in the

[6] NEJAC Reducing Air Emissions Associated with Goods Movement. November 2009

Community Facilitated Strategy model described by NEJAC contribute substantially to the literature on effective community involvement and that employing the principles in the model can improve environmental outcomes. EPA has a long history of working with communities impacted by goods movement. For example, as described in the NEJAC report, the collaborative effort in West Oakland over the past eight years has applied many of the principles of the Community Facilitated Strategies approach. EPA realizes that cooperation among federal, state, and tribal governments and with communities is critical. EPA is committed to continuously improving its efforts to work cooperatively with this cross section of partners to address the environmental consequences of the goods movement system.

As detailed in Table 1, Community Based Goods Movement Projects, EPA is involved in many collaborative community-based goods movement projects that have taken a variety of approaches. There are nearly 20 projects listed, with varying degrees of similarity to the approaches recommended in the NEJAC report, either using community facilitated strategies (CFS) or collaborative governance (CG) processes. EPA continues to build upon and improve its efforts to work with communities to address the impacts of goods movement. As part of EPA's efforts with the CARE program and in developing better community focused grant programs, EPA's CARE Team will continue its efforts to work with and transfer lessons learned among CARE communities to support their efforts to deal with this issue.

Table 1: Community Based Goods Movement Projects*

Goods Movement Projects which are (1) community-based, (2) collaborative, (3) convened by either CBO, NGO or government agency, (4) include capacity building.					
EPA Region	**Community/ Project**	**Type of goods movement activity**	**Forum (convened by agency, NGO, CBO. More like CG or CFS ?)**	**EPA role**	**Community capacity building**
1	New Haven, CT	Port, truck	City led planning effort, CARE collaborative process. Most resembles CG	CARE Level II funding and involvement	Community and stakeholders have developed capacity by way of participation in the collaborative.
1	Bridgeport, CT	Port, truck	Showcase Community. New project, will be multistakeholder and collaborative, may have elements of both CG and CFS.	EPA Showcase Community	Capacity development by way of participation in project and collaboration.
2	Camden, NJ Waterfront	Port, trucks, rail	CARE collaborative process convened by NGO (CAC)	CARE Level II funding and involvement	Community and stakeholders have developed capacity by way of participation in the collaborative. CARE advisory group superseded by WESN, a “community-driven” group.
2	Newark, NJ,	Ports (sea	CARE collaborative	CARE Level I	Community and stakeholders

Goods Movement Projects which are (1) community-based, (2) collaborative, (3) convened by either CBO, NGO or government agency, (4) include capacity building.					
EPA Region	**Community/ Project**	**Type of goods movement activity**	**Forum (convened by agency, NGO, CBO. More like CG or CFS ?)**	**EPA role**	**Community capacity building**
	Ironbound Community	and air), rail and highway	process convened by NGO (ICC)	funding and involvement	have developed capacity by way of participation in CARE process.
2	Port of NY/NJ	Port, truck, rail	Port Authority convened multistakeholder collaborative workgroup on trucks. Most resembles CG.	Participated in workgroup, assisting in outreach with community and others	Community groups participated in prioritization of strategies.
2	San Juan, Puerto Rico	Port, trucks	Northeast Diesel Collaborative (NEDC) convened by PR Environmental Quality Board. CG model.	Supported formation of Collaborative; possible diesel funds.	By participation in the collaborative. Some training (grants process).
3	Southeast Philadelphia	Port, rail, truck	CARE collaborative process convened by CBO/NGO (Clean Air Council)	CARE Level I and II funding and involvement	Community and stakeholders have developed capacity by way of participation in CARE process. Funding supports staffing and running the collaborative, training and technical assistance.
4	Mebane, NC	Goods movement highway traffic	Collaborative convened by grassroots CBO (WERA). Prototype for CFS.	Small EJ grant followed by CPS	Community and stakeholders have developed capacity by way of participation in this project, which became the model for CFS.
4	Savannah , GA	Port, trucks	CARE collaborative process, convened by Harambee House (CBO)	CARE Level I and II funding and support	Funding supports staffing the collaborative, training, technical assistance
5	Detroit/ Detroit Air Toxics Initiative (DATI)	Rail yards, trucks, (area includes two international crossings (Canada)	CG; state agency convened multistakeholder group to advise monitoring and tech /risk assessment. No mitigation phase planned.	CARRI funding to Michigan DNR	By way of involvement in stakeholder group, otherwise no targeted training, community funding etc.
5	Southwest Detroit	Freeway truck traffic	CARE collaborative process, convened by SDEV	CARE Level I to SDEV	By way of education, outreach, involvement in prioritization process
6	Laredo, TX	International bridges (four)	CARE collaborative process; convened by City of Laredo	CARE Level II	By way of involvement in CARE process which included support for staffing the collaborative process and training.

Goods Movement Projects which are (1) community-based, (2) collaborative, (3) convened by either CBO, NGO or government agency, (4) include capacity building.					
EPA Region	**Community/ Project**	**Type of goods movement activity**	**Forum (convened by agency, NGO, CBO. More like CG or CFS ?)**	**EPA role**	**Community capacity building**
7	St. Louis, MO	Highway trucks	Collaborative diesel reduction; funding to State, CBO convener	CARE and DERA	Building on earlier CARE work, applying capacity to specific diesel reduction projects.
8	West Salt Lake City, UT	Freeway trucks, airport	Expecting to use elements of both CG and CFS. State DEQ and EPA as conveners.	EPA Showcase Community	Plan is to build capacity by way of training and other approaches within constraints of Showcase program.
8	Northeast Denver, CO	Rail, freeway trucks, refineries	CARE collaborative process; convened by Groundwork Denver (CBO); since then devolved to working groups, usually convened by EPA. Elements of both CG and CFS.	CARE Level I and II funding.	By way of involvement in CARE process which included support for staffing the collaborative process and training.
9	West Oakland, CA	Marine port, trucks/freeways	CARE, collaborative co-chaired by community/CBO and EPA. Most resembles CFS model.	CARE Level II funding and numerous other EPA and other grants (air toxics, EJ)	Involvement and leadership of collaborative has developed community capacity; one of collaborative leaders, member of fenceline community, appointed to Port Commission; CBO is funded to run collaborative, conducts community training; some technical assistance is funded.
9	San Diego/EHC	Port, trucks, freeways	CBO convened multistakeholder collaborative. Most resembles CFS model.	CARE Level II funding. EHC and EPA partnered earlier in Barrio Logan collaborative.	Involvement in collaborative; training; promotora program; technical assistance.
9	Los Angeles 710 Corridor	Port, trucks, freeway	Showcase Community approach, conveners still being defined.	Showcase Community	Capacity development by way of participation in project and collaboration.
10	Seattle International District	Freeway trucks; Port of Seattle has some impact.	CARE collaborative process, convened by CBO (IDHA)	CARE Level I and II	Full suite of tactics using language and culturally appropriate tools.

* Acronyms are spelled out in Appendix D

Environmental Justice Showcase Communities

EPA has dedicated $1 million to pool the collective resources of governmental and non-governmental organizations in 10 communities with environmental justice concerns throughout the country. These Showcase Community projects are demonstrations to help identify model practices to achieve environmental results with community involvement using a collaborative governance approach. For example, EPA Region 9 and the California Environmental Protection Agency's (CalEPA) Department of Toxic Substances Control (DTSC) are coordinating enforcement activities in the communities along the Interstate 710 cargo corridor between the two San Pedro Bay Ports. EPA is soliciting input from the surrounding communities on how to focus inspection and compliance efforts in the highest priority areas. EPA will use lessons learned from the Showcase communities to guide future EPA programs.

Healthy Community Grants

EPA believes that the CARE model closely aligns with the Community Facilitated Strategies ideas presented in the report. In light of this, and in view of recommendations for creating a sustainable source of funding for goods movement communities, EPA is examining how to build on the CARE model to further empower communities by providing funding and technical resources to prioritize and address environmental and health risks related to goods movement and other environmental challenges.

EPA believes it can better meet the needs of communities by aligning existing grant programs so that they are more accessible for communities and can be efficiently administered by the Agency. To complement EPA's limited funds for these projects, EPA hopes to coordinate with Department of Transportation (DOT), Department of Housing and Urban Development (HUD) and others for more multi-agency funding.

Creating a consolidated Healthy Community Grant program would allow larger funding pools than afforded by the existing small community grants and would allow communities to focus on assessment and mitigation of environmental problems including those in goods movement communities. EPA is currently exploring the development of a consolidated community grant program through the fiscal year 2012 budget process.

Expand Community Participation in EPA's Regional Clean Diesel Collaboratives

EPA's seven Regional Clean Diesel Collaboratives provide a mechanism for communities to participate with other stakeholders and different levels of government in a collaborative process to develop programs, projects, policies and strategies to reduce diesel emissions. Since their formation in the 2005 through 2006 timeframe, these Collaboratives have led to goods movement projects jointly funded by local, federal, state, and tribal governments, nongovernmental organizations and industry. Many of these projects have leveraged federal funds

from the EPA Diesel Emission Reduction Program, the Agency's grant program for mitigating diesel emissions from the in-use fleet of engines and vehicles. This program is commonly referred to as DERA.[7] Nongovernmental organizations whose principle purpose is promotion of transportation and air quality are eligible to receive DERA funds, as are units of government. Community membership in the Regional Clean Diesel Collaboratives can foster partnership between communities and DERA eligible grant recipients. The DERA program is discussed in greater detail in Section 8. A wide range of DERA projects are given in Appendix C. EPA and the Regional Clean Diesel Collaboratives will work with the Office of Environmental Justice to make communities more aware of the opportunities for developing collaborative projects through participation in EPA's Regional Clean Diesel Collaboratives (Figure 1).

Figure 1

Community Input - EPA Federal Advisory Committee Memberships

EPA has a number of federal advisory committees, some of which have a goods movement focus. In particular, the Clean Air Act Advisory Committee's Mobile Sources Technical Review Subcommittee (MSTRS) provides advice on the full range of goods movement issues including regulatory and nonregulatory policies. This subcommittee was instrumental in the formation of the Agency's National Clean Diesel Campaign. In its 2010 campaign to recruit new members for the MSTRS, EPA expanded the group and specifically sought out a respected voice from the environmental justice community to ensure that community and environmental justice issues related to mobile sources and goods movement were given a champion. EPA is committed to ensuring

[7] Initiated as a stand alone Diesel Emissions Reductions Act (DERA), this authorizing legislation was ultimately included in the Energy Policy Act of 2005 (EPAct 2005). However, the term DERA persists.

that the membership in federal advisory committees is diverse and that the community perspective is adequately represented on all its federal advisory committees, not just NEJAC.

Communications: Agency Web Portal, Goods Movement Clearinghouse and External Communication (Response to Recommendations 13, 24, 29, 33)

Effective community involvement requires effective communication between EPA and environmental justice communities. As the team considered NEJAC's recommendations, it became clear that the Agency needed to do a better job of communicating the opportunities of EPA's existing programs and the availability of technical information and tools designed for communities and to provide those tools in several languages. NEJAC recommended establishing a goods movement clearinghouse with materials translated into several languages. It also recommended making sure goods movement impacts are well understood by all who have a role preventing or mitigating these impacts. EPA agrees that it is important to educate elected officials as well as other organizations such as regional and municipal planning organizations, and departments of transportation about the impacts of goods movement so that these organizations can better use the authorities vested in them to address environmental justice concerns. EPA also agrees that it is important to engage communities as it does future planning and program development. EPA is taking several steps to address the set of recommendations relating to communication.

<u>The Goods Movement Clearinghouse</u>

EPA has extensive resources readily available for community organizations interested in implementing clean diesel activities to address goods movement issues in their communities. Included among these are best practices documents regarding clean diesel activities.

The National Clean Diesel Campaign website (www.epa.gov/cleandiesel) links to the websites of the seven EPA Regional Clean Diesel Collaboratives and will serve as the Agency's Goods Movement Clearinghouse for materials that provide information on how to implement clean diesel activities in local communities. The best practices materials, case studies of successful projects and technical information are all accessible via EPA's clean diesel web pages. Links to additional external resources are available as well. Funding opportunities are also on these web pages.

For community organizations interested in implementing clean diesel programs there is a comprehensive *State and Local Toolkit* on the clean diesel website. This toolkit provides a compilation of examples and procedures designed to help state, tribal and local entities improve air quality and public health through diesel emissions reduction efforts. The State and Local Toolkit provides detailed information on how to build program support. The Toolkit includes information about issues to consider in implementing and designing a clean diesel program, including idle reduction initiatives. Several CARE programs have included clean diesel components such as idle

reduction efforts in their communities. These include Grace Hill Settlement House in Kansas and DeKalb County in Georgia.

The State and Local Toolkit also provides funding and evaluation information. The purpose of this resource is to prevent communities and governments from having to "recreate the wheel" and instead benefit from the lessons learned from others. Additionally, EPA Clean Diesel Helpline, 1-877-NCDC –FACTS (1-877-623-2322), is available for community organizations that want answers to questions regarding how to apply for clean diesel funding and implement clean diesel activities.

Translation into Spanish and Other Languages

The National Clean Diesel Campaign is looking into options for translating materials on the www.epa/gov/cleandiesel into Spanish and other languages. Each program in EPA is responsible for the translation of all its own materials. OTAQ is committed to prioritizing translation of its goods movement community resource materials and to seeking resources for this purpose. Translating good movement materials into Spanish will be NCDC's first priority for translation.

Community Web Portal

The CARE Executive Steering Committee agreed to fund a community-oriented Environmental Public Health Web Portal. This public site will provide "one-stop shopping" for communities for general EPA and Health and Human Services agency information, access to community tools designed by these agencies, and lists of funding opportunities and guidance. This site will also provide a means for communities to interact and share experiences and solutions when facing similar environmental health concerns. Four EPA Offices agreed to fund a quarter of the EPA contribution to the portal, including the Office of Air and Radiation. The portal will be available in the summer of 2011. Information available through the Portal will include:

- Goods movement information on goods movement projects, best practices and tools
- Technical Assistance Guide outlining resources for communities
- Community friendly guides to risk screening and risk ranking, including CARE best practices
- Guidance on measures and reporting outcomes from community action, including measurement of risk reduction or improved sustainability as a result of community action
- Grant information and application tips, including a community guide to Grants.gov
- Geographically referenced resource information
- Links to EPA resources, Centers for Disease Control (CDC) data and other agencies' information

Goods Movement Communications Strategy

EPA's Office of Air and Radiation is developing a Goods Movement Communication Plan that will target communities as well as DOTs, Metropolitan Planning Organizations (MPOs) and other state and local governments involved with siting or operating goods movement facilities and infrastructure. The goals of the plan will include: (1) Enhancing outreach to communities regarding clean diesel activities and opportunities, (2) Soliciting input from communities through OEJ environmental justice listserv on EPA goods movement policies, and (3) Informing other organizations and agencies of the impacts of goods movement.

As a first step, EPA has already widely distributed the NEJAC Goods Movement Report within EPA, DOT and the Transportation Research Board's Environmental Justice in Transportation Committee. EPA has recently briefed all the new Regional and Assistant Administrators on the report. EPA will continue to educate other agencies about the impacts of goods movement through the HUD-DOT-EPA Interagency Partnership for Sustainable Communities as well as conferences and work groups with organizations such as American Association of State Highway Transportation Officials (AASHTO), the Environmental Commissioners of the States (ECOS), American Association of Port Authorities (AAPA), and National Association of Clean Air Agencies (NACAA).

EPA employs a variety of methods to communicate with the communities concerned about goods movement and environmental justice. For example, EPA recently used NEJAC's listserv to notify members that OTAQ's draft quantitative particulate matter (PM) hot-spot guidance was available for comment (see Section 4). EPA's Office of Air Quality Planning and Standards plans to hold regularly scheduled calls on OAR regulatory issues that can be used to distribute goods movement information and to discuss goods movement issues. Also, a webinar series on *"How to Implement Clean Diesel Activities in Your Community"* is in the planning stages. These and other goods movement related webinars can be recorded and placed on EPA's clean diesel web pages. EPA is committed to continuing to coordinate with OEJ to ensure that the environmental justice community is aware of opportunities to comment on goods movement guidance and policies.

Section 3

Health Research Gaps and Educational Needs

(Response to Recommendations 7-12, 14)

EPA has determined that diesel exhaust is "likely to be carcinogenic to humans by inhalation." Numerous studies have been conducted and are planned by EPA in cooperation with other federal agencies to further characterize the health effects of goods movement at the community level, especially in children. However, additional data on the near source localized impacts of goods movement would be helpful in prioritizing mitigation efforts.

The NEJAC report makes a series of recommendations to address what NEJAC considered data gaps. These include: conducting additional cooperative research between federal agencies, especially research with community participation; identification and prioritization of all major ports and rail yards in the country; promotion of Health Impact Assessments in NEPA reviews; and revisiting the diesel risk assessment EPA completed in 2002. NEJAC also recognized the lack of federal funding for research efforts and the need to build awareness of the health ramifications of goods movement.

The Response Team has divided the responses to this set of recommendations into the following segments:

- Identification and Prioritization
- Monitoring
- Research
- Assessment

Recommendations regarding building the awareness of potential impacts of goods movement are addressed in Section 2.

Identification, Mapping and Prioritization of Goods Movement Facilities for Action

NEJAC recommended that EPA establish a list of the largest ports and rail yards in the United States, and analyze the demographics near those facilities as well as assess the contribution from off-site transportation highways and corridors adjacent to those facilities. Further, NEJAC recommended that EPA regions prioritize the most significant goods movement facilities for localized air toxic monitoring and additional research.

These recommendations were taken into consideration by EPA's EJ Standing Committee of the Executive Management Council when it prioritized Goods Movement and Air Toxics as one of the top five priority areas for

action in 2009-2010. As part of this priority, EPA formed an Agency-wide Goods Movement/Air Toxics Workgroup, which identified two overarching goals:

- Identify EJ communities disproportionately impacted by goods movement and
- Set priorities for regional program implementation to target environmental and health issues affecting those communities.

The co-chair of the NEJAC Goods Movement Work Group briefed EPA's Agency-wide Goods Movement/Air Toxics Work Group so that the NEJAC recommendations could be considered as EPA set its goals.

EPA regions are in the process of creating an inventory of all the goods movement facilities within their states. In most cases, they are using GIS mapping combined with census and other data to determine disadvantaged or vulnerable populations near these goods movement facilities. The first step in the process is to use GIS tools to identify and place goods movement facilities on a regional map. EPA is working with state and local government agencies for much of the on-the-ground information on these facilities including multiple sites or administrative offices vs. distribution centers. For example, Figure 2 maps the goods movement centers in Portland, Oregon. Once the goods movement facilities are identified, the sources will be overlaid with census vulnerability maps to determine where the most sensitive communities are within each region. This information can be used to inform the Agency's planning process.

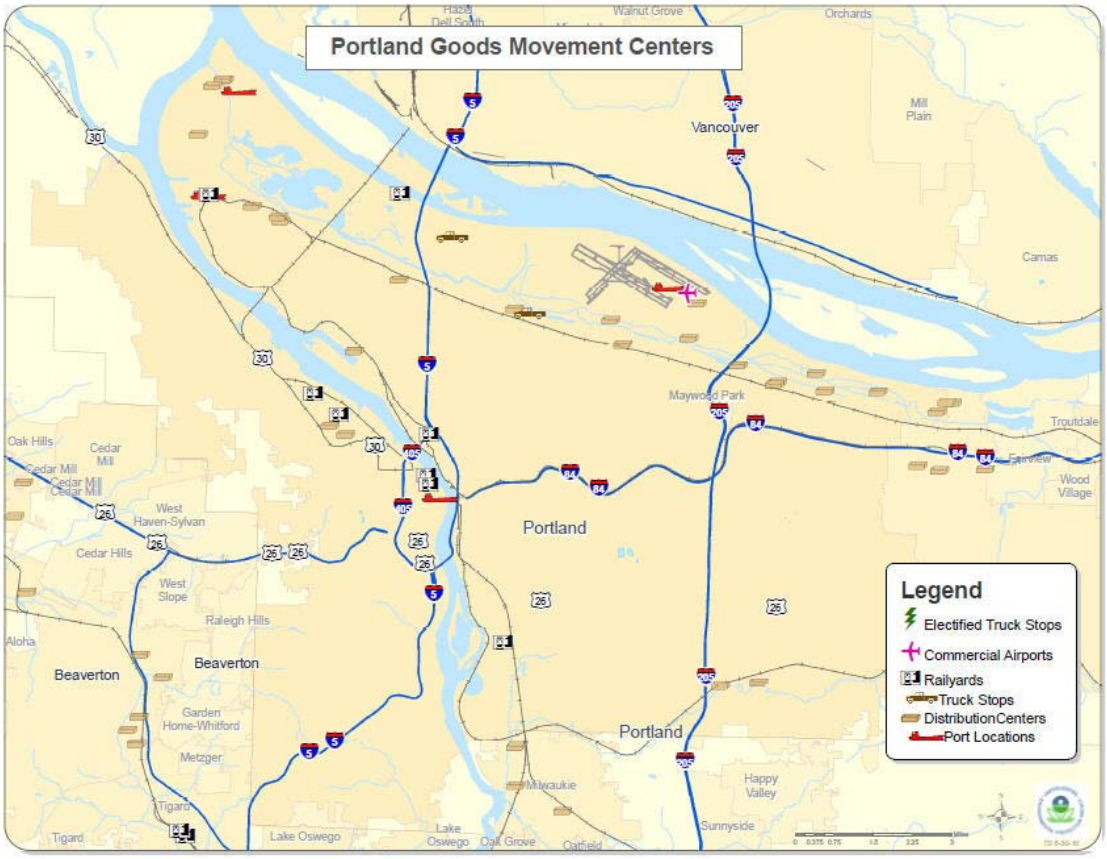

Figure 2

EPA's new public mapping tool, EJView, is under Agency review. This model will replace the Environmental Justice Geographic Assessment Tool. The Geographic Assessment Tool was one of the first mapping tools designed to screen for areas with potential environmental justice concerns. EJView will allow EPA and communities to overlay demographic, health, and other environmental information on a map to get a snapshot of the multiple factors affecting a community or a project area. The Agency will continue to develop tools to provide a consistent but flexible way to evaluate the demographics of the communities near goods movement centers.

Increased Monitoring

EPA continues to support our community-scale air toxics monitoring program, which in the past has frequently been used to evaluate air quality in communities impacted by goods movement activities. For example, as part of our recent revision to the National Ambient Air Quality Standard (NAAQS) for NO_2, a pollutant found in higher concentrations in close proximity to roadways, EPA created a requirement for locating at least 40 new NO_2 monitors in communities that may be particularly vulnerable to NO_2-related health effects.

The Community-Scale Air Toxics Ambient Monitoring (CSATAM) grant program was initiated in 2003 by EPA's Office of Air Quality Planning and Standards. Working in conjunction with the Office of Transportation and Air Quality, the Office of Research and Development's National Exposure Research Laboratory, and the ten EPA regional offices, these centrally managed grant competitions are conducted at two to three year intervals with resultant grants awarded and managed by the Regional Offices.

The CSATAM grants are intended to assist state, local and tribal communities in identifying and profiling air toxics sources, characterizing the degree and extent of local air toxics problems, and tracking progress of air toxics reduction activities. Expected outcomes of these projects are increased state, local and tribal agency ability to:

- Characterize the sources and local-scale distribution of hazardous air pollutants (HAPs), and
- Assess human exposure and risk at a local scale. These increased capabilities are expected to facilitate increased public and industry awareness, and (though beyond the scope of the grant projects) lead to developing and adopting control measures and mitigation strategies that will reduce hazardous air emissions and public exposure.

To date, EPA's Air Quality Assessment Division's Ambient Air Monitoring Group (AAMG) has conducted three CSATAM grant competitions. The first RFA cycle was in 2003-2004 and 16 projects were selected for award from 49 proposals. The second application cycle was in 2005-2006, and 19 projects were selected for award from 58 proposals. The third competition was in 2007, and of the 60 eligible applications, funding was awarded in 2008 to 17 projects. Projects from the first two grant cycles have been completed; projects from the third cycle are anticipated to be complete between 2010 and 2012. Competition-specific RFAs, awarded project plans, and final reports are available at http://www.epa.gov/ttn/amtic/local.html.

Recently, during fiscal years (FY) 2009 and 2010, the entire (approximately $5 million annually) CSATAM funding allocation was redirected from this program to higher priority needs. Specifically, the FY09 funds were allocated to the Schools Air Toxics initiative and lead monitoring infrastructure. In FY10, all funds were allocated for criteria pollutant needs, though an additional $2.5 million was included in the budget to complete the Schools Air Toxics initiative. For FY11, EPA anticipates that the CSATAM funding will again be included in the budget and available for the intended use. Accordingly, OAQPS plans to conduct another CSATAM grant competition with a focus on community assessments (to include, but not limited to, schools). The principle objective will be to characterize the degree and extent of local-scale air toxics problems. This funding will be available for goods movement communities. EPA will ask NEJAC for comment during the development of the request for applications.

Diesel Health Assessment and EPA Research related to Goods Movement

NEJAC recommended that EPA revisit its health assessment of diesel exhaust emissions reported in its Health Assessment Document for Diesel Engine Exhaust (Diesel HAD) in May 2002. Since the HAD was issued in 2002, EPA has promulgated new tighter heavy-duty vehicle standards (effective model year 2007), nonroad diesel standards, and locomotive and marine diesel standards. These standards continue to achieve large reductions in diesel PM (a total of almost 300,000 tons in 2030) as well as NOx emissions. In 2030, it is estimated that the health benefits of these actions will include significant reductions in premature mortality (21,700), avoided hospital admissions (16,870), and lost work days (about 2,600,000). Additionally, the EPA's Office of Research and Development (ORD) has an active research program to evaluate the impacts of mobile source emissions on air quality, exposures and health effects in communities impacted by goods movement related to diesel emissions and other pollutants. This research is performed by scientists within and outside the agency. A substantial portion of the research is near-road related research that was not specifically directed at goods movement but the results and approaches of which are helpful in assessing the impacts of goods movement facilities on neighboring communities.

To evaluate NEJAC's request to revisit the Diesel HAD, the Agency convened technical experts from ORD and OAR who have been following the body of diesel research and senior staff who were involved with the 2002 assessment. This group considered NEJAC's recommendation in light of the current status of diesel risk characterization research to determine whether new research warranted conducting a new assessment at this time.

The 2002 Diesel HAD did not provide a unit cancer risk (i.e., cancer potency) for diesel exhaust because the exposure-response data associated with the observed increased lung cancer incidence was judged insufficient to confidently develop a unit cancer risk value. Nonetheless, the characterization of the likely cancer public health hazard from chronic exposure to diesel exhaust contained in the 2002 Diesel HAD supported extensive EPA

regulatory and other initiatives to reduce exposure to diesel exhaust since 2002. At this time, no new information has become available which could be used to estimate the cancer potency for diesel engine exhaust. Without new information, EPA would not be able to develop a unit cancer risk estimate for diesel.

The NEJAC's recommendation also indicated that as part of an updated Diesel HAD, EPA should consider other health outcomes such as cardiovascular and respiratory illnesses. The 2002 Diesel HAD considered these outcomes and the respiratory effect data in rodents to be sufficient to recommend a diesel reference concentration (RfC) of 5 micrograms per cubic meter for humans, based on chronic exposures. There was insufficient evidence on cardiovascular endpoints to support an evaluation at that time.

EPA is currently reviewing the National Ambient Air Quality Standards (NAAQS) for PM, for which the Integrated Science Assessment for PM was completed in December 2009. As ambient PM includes diesel particles, recent studies on the health effects of diesel exposures were included in that evaluation and contributed to the conclusions drawn in that assessment. The Diesel HAD Reference Concentration was focused on non–cancer effects of chronic exposure, whereas some of the recent publications on cardiovascular and respiratory effects are related to acute exposures. The PM NAAQS review will be completed by the end of 2011 with the publication of the EPA Administrator's decision on whether to retain or revise the current NAAQS standards for PM. Decisions made during this review could inform Agency thinking on whether to consider a more focused update or review of diesel exhaust non-cancer risks, such as respiratory and cardiovascular effects.

The US EPA's 2002 Diesel HAD noted in the forward that "as cleaner diesel engines replace a substantial number of existing engines, the general applicability of the conclusions in this health assessment (i.e., May 2002) will need to be reevaluated." This statement anticipated the use of new emission control technologies for particulate matter and oxides of nitrogen in response to national emission standards for heavy duty highway engines and fuel sulfur promulgated in 2001. The emission standards necessitated the use of exhaust particle traps to meet stringent diesel PM standards in the 2007 model year, and additional nitrogen oxide reduction systems for the 2010 model year. These highway vehicle standards were followed by standards for nonroad diesel engines.[8] These new requirements have changed and will continue to change the characteristics of diesel exhaust for newer engines. It was specifically in this context of evolving diesel emission control technologies that EPA indicated the exhaust from newer engines would need to be evaluated. EPA did not plan to update the conclusions of the HAD for older diesel engines.

[8] Emission and fuel sulfur standards were introduced for nonroad diesel engines (2008-2015 model year phase-in), locomotive (2011-2015 model years phase-in) and marine diesel engines under 30 liters per cylinder (2009-2017 model year phase-in). For marine diesel engines over 30 liters per cylinder, EPA has established NOx emission standards (beginning model year 2016) and has worked with the International Maritime Organization to designate waters off North American coasts as an area in which new international emission standards will apply beginning in 2012.

The Health Effects Institute (HEI), in its ongoing Advanced Collaborative Emissions Study (ACES), is testing emissions from new diesel engines and performing toxicological studies on rodents, looking at cancer and non-cancer endpoints. The final HEI report is planned for 2013. Regarding previous older diesel engines, at the time of the diesel HAD there were two pending epidemiologic studies of lung cancer and diesel exhaust in workers exposed to diesel exhaust. The National Cancer Institute (NCI) has funded the Trucking Industry Particle Study (TrIPS), conducted by researchers at Harvard University. A joint team of researchers from NCI and National Institute of Occupational Safety and Health (NIOSH) are also conducting a study of lung cancer in non-metal miners. While neither TrIPS nor the NCI-NIOSH joint study has published information that would allow calculation of a quantitative unit risk specifically for diesel exhaust, these research efforts considering new and older engines are moving the state of the science related to diesel emissions forward.

In addition to these studies, EPA has invested heavily in research (intra- and extra-mural) related to diesel and goods movement. Below is a summary of completed, on-going and planned toxicological, epidemiologic, exposure, and source apportionment research.

- ORD has conducted toxicity studies to further investigate the health effects of diesel emissions. These studies included animal and cellular models of asthma, cardiovascular disease, developmental outcomes, and susceptibility factors. These studies involved exposures of animals to (1) diesel emissions generated under controlled conditions and (2) particles collected in the field at different near-roadway investigation sites where emissions were characterized. The results show that diesel exhaust particles from different engines, sources, or operating conditions have different toxicity resulting in a variety of different impacts including: mutagenicity, pulmonary inflammatory responses, and intensity of allergic reaction. These data show that both the carbon core of diesel and the associated organics play a role in the observed health effects. In addition, studies of human exposures to very low levels of emissions are ongoing to develop biomarkers of exposure and effects that can be correlated with on-site monitoring studies. Thus, these studies are proceeding in a complementary manner to integrate and better understand health effects of air pollutants associated with diesel-based transportation on major roadways.

- Field studies of toxicology and epidemiology have also been performed to examine health effects of mobile source air pollutants. A field study in Raleigh, North Carolina, focused on the toxicity of particles (coarse, fine and ultrafine) collected adjacent to a heavily traveled interstate. In El Paso, Texas, and Detroit, Michigan, ORD studied children's respiratory health, including asthma, and pulmonary function in grades 3 - 5 in Texas and ages 9 -13 in Michigan. Both cities are major ports of entry for truck traffic into the United States. Both studies were complemented by independent, but parallel research in Mexico and Canada. Although not specifically the target for these near-roadway studies, the respiratory health data could be analyzed in terms of goods movement.

- Field studies have also been performed to characterize the emissions and movement of mobile source air pollutants adjacent to roadways and impacts on neighboring communities. Work funded through the ORD's Science To Achieve Results (STAR) program includes the PM Center's program which supported research to determine the contribution of the Los Angeles port facility on emissions that contribute to PM of various sizes (coarse, fine and ultrafine). In partnership with EPA's Region 9, ORD has also been involved in an effort to determine air quality impacts in communities adjacent to the Los Angeles International Airport (LAX). The Detroit Exposure and Aerosol Research Study (www.epa.gov/DEARS) was completed in 2007 and involved characterizing source-related exposures and effects in communities adjacent to the Ambassador Bridge and other industrial sources. The Ambassador Bridge is a major goods movement corridor (greater than10,000 commercial vehicles each day) that involves the transport of more than 25% of all merchandise trade between the U.S. and Canada.

- ORD has also conducted additional studies at the Dearborn rail yard in Detroit. This study determined specific sources of pollution (source apportionment) for the rail yard. The Dearborn source apportionment study focused on determining the impact of several industrial source categories, including the rail yard, on ambient air pollution. The EPA's Region 5 was awarded a Regional Applied Research Effort (RARE) grant to further investigate the effect of rail yard emissions on local air quality. A field modeling and emissions inventory study was completed in 2008-2009, focusing on the Dearborn rail yard. In the second phase of the RARE project, ORD plans to further study rail yard emission impacts on local air pollution by mapping air pollutant concentrations using a novel air monitoring vehicle, in areas surrounding a rail yard in Chicago, Illinois (2010), and Atlanta, Georgia (2011).

- Future near-road research studies looking at pollution within 300 meters of the roadways are planned for Detroit and Raleigh to evaluate the effects of mobile source emissions on local-scale air quality, and human exposures and health effects. The research will involve FHWA, and the respective State DOTs will provide data that will be used to evaluate and improve modeling capabilities to estimate the dispersion, or movement, of roadway emissions into adjacent communities. Additional research funded by ORD will support toxicology and epidemiology (population) studies in both cities to examine the health effects of near-road exposures to air pollutants.

EPA's National Center for Environmental Research (NCER) funded a cooperative agreement study with the University of Michigan to evaluate the relationship between near-road exposures and a range of respiratory impacts in asthmatic children living near roadways in Detroit. Investigators will rely on community-based participatory research to both recruit and engage local stakeholders. In support of this study, ORD scientists will

perform toxicology studies of air samples collected in the neighborhoods where the children live. Future research is currently being planned for the Raleigh area that will involve an epidemiology study (likely looking at adults) as well as toxicology studies. ORD is reviewing the gaps identified in the Health Effects Institute (HEI) Special Report on Traffic-Related Air Pollution and will design the research studies accordingly to address a number of these gaps. Also, ORD is currently exploring opportunities to partner with the National Institute of Environmental Health Sciences (NIEHS) Exposure Biology program in these upcoming research studies.

Transportation Research Board

EPA has shared the NEJAC report with the Transportation Research Board's (TRB) Environmental Justice in Transportation Committee and asked that it be discussed at an upcoming committee meeting. Members of the committee include metropolitan planning organizations, state DOTs, USDOT and community groups. "TRB is one of six major divisions of the National Research Council— a private, nonprofit institution that is the principal operating agency of the National Academies in providing services to the government, the public, and the scientific and engineering communities. The National Research Council is jointly administered by the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The TRB's varied activities annually engage more than 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest by participating on TRB committees, panels, and task forces. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation"[9].

[9] www.trb.org

Section 4
Regulatory and Enforcement Mechanisms
(Response to Recommendations 15-21)

Regulations are an effective means of controlling emissions from mobile sources. EPA has a comprehensive regulatory program of standards for new engines involved in freight operations including trucks, marine and locomotive engines, and engines used in port and airport operations. These standards have been systematically tightened over time as technology has evolved and are enforced at the national level. However, diesel engines have a long life-time and fleet turnover rates are low.

NEJAC specifically recommended further regulation of international ships and aircraft, accelerating fleet turnover through incentives such as credit in State Implementation Plans (SIPs) and encouraging expansion of operational measures at the state and local level. It also recommended strengthening regulatory programs such as transportation conformity to ensure that the expansion and siting of goods movement facilities include consideration of local impacts. NEJAC further recommended using enforcement mechanisms such as settlements in enforcement cases to clean up existing fleets used in goods movement.

EPA has made significant progress on these recommendations which is detailed below.

International Standards for Marine and Aircraft Engines and North American Emission Control Area

On March 26, 2010, the International Maritime Organization (IMO) adopted the North American Emissions Control Area (ECA). Ocean going vessels operating in the ECA will need to meet more stringent emission standards than required elsewhere. The rule, when completely phased in, will result in large reductions in NOx and PM from large ships. It is part of EPA's comprehensive regulatory strategy to address emissions from marine engines. EPA is now poised to work with its counterparts in Canada and the US Coast Guard on implementation. The ECA will bring significant public health benefits to North America including communities near ports and freight centers. Figure 3 shows the geographic area benefiting from the fuel requirements of the ECA. In 2009 EPA completed a Clean Air Act C3 Marine rulemaking which will complement the IMO action by reducing emissions from large ocean-going vessels. EPA evaluated costs and benefits of policy options as well as the environmental justice impacts of the rule making.[10,11]

[10] ICF International. December 1, 2008. Estimation of diesel particulate matter concentration isopleths near selected harbor areas with revised emissions (revised). Memorandum to EPA under Work Assignment Number 1-9, Contract Number EP-C-06-094. This memo is available in Docket EPA-HQ-OAR-2007-0121.

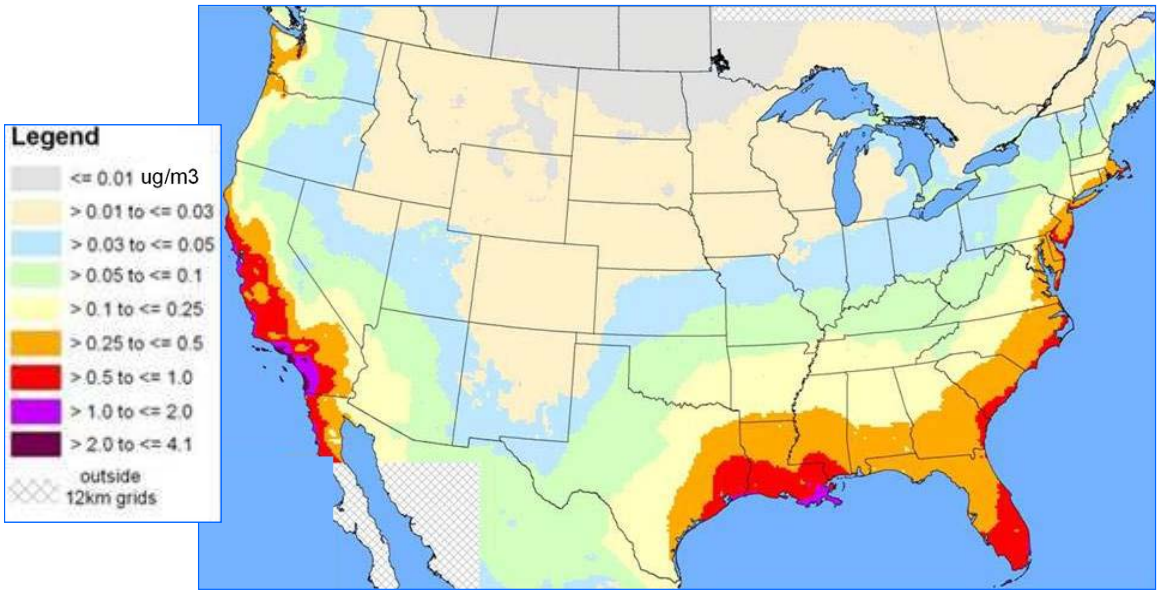

Figure 3: Projected Reduction in Particulate Matter (PM) in micrograms per cubic meter from North American Emission Control Area

Historically, EPA worked with the Federal Aviation Administration (FAA) and the International Civil Aviation Organization (ICAO) in setting aircraft engine emission standards and related requirements. Under this approach international standards were first adopted by ICAO. EPA has initiated Clean Air Act rulemakings to establish domestic standards that are at least as stringent as ICAO's standards. In February 2010, ICAO adopted more stringent NOx standards for aircraft gas turbine (jet) engines, which will be effective in 2014, and EPA intends to adopt NOx standards equivalent to the recent ICAO standards in a future rulemaking. In addition, EPA is working with FAA and ICAO to develop a certification requirement by 2013 for PM emissions from aircraft engines. Subsequently, the establishment of an ICAO PM standard will likely occur in 2016. EPA anticipates adopting equivalent PM provisions in a future rulemaking. On April 24, 2010, EPA issued a notice of advanced rulemaking to collect data on the health impacts of lead in aviation gas used by piston-engine aircraft (http://www.epa.gov/otaq/aviation.htm).

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[11] ICF International. December 10, 2008. Estimation of diesel particulate matter population exposure near selected harbor areas with revised harbor emissions (revised). Memorandum to EPA under Work Assignment Number 2-9, Contract Number EP-C-06-094. This memo is available in Docket EPA-HQ-OAR-2007-0121.

Locomotives

In 2007, EPA conducted an analysis of selected rail yards and marine ports to better understand the populations, including minority and low-income, that are exposed to particulate matter (PM) emissions from these facilities. This screening-level analysis indicates that at the 37 rail yards studied, as many as 1.5 million people, including a high percentage of low-income households, African-Americans, and Hispanics, live in the vicinity of these facilities and are exposed to higher levels of PM than urban background levels. The Agency sought to reduce locomotive emissions through both regulatory and non-regulatory efforts, including locomotive standards, the Diesel Emissions Reduction (DERA) program and SmartWay Transport program.

Locomotive standards established by EPA in 1998 have resulted in large emission reductions over the past decade, and continue to yield benefits as new Tier 2 locomotives replace older units. These standards reduce ozone-forming oxides of nitrogen (NOx) by 60%.

EPA's stringent new Tier 3 and Tier 4 standards will begin to take effect in 2011, and by 2015 will require new locomotives to be 90% cleaner than today's cleanest Tier 2 units, through the use of diesel particulate filters and NOx aftertreatment devices. Stringent new standards for remanufactured locomotives and idle reduction controls are already being phased in. Special provisions have also been put in place to encourage the use of even cleaner locomotives in rail yards. These provisions include a Tier 3 standard for rail yard switchers that is one year earlier and at a lower NOx level than for line-haul locomotives, and a streamlined certification process to encourage the use of even lower-emitting nonroad engines in switchers.

Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas

Transportation conformity is a Clean Air Act requirement to ensure that federally supported highway and transit activities are consistent with (``conform to'') the purpose of the SIP. Conformity to the purpose of the SIP means that a transportation activity will not cause or contribute to new air quality violations; worsen existing violations; or delay timely attainment of the national ambient air quality standards or any interim milestone. Transportation conformity applies in nonattainment and maintenance areas for transportation-related pollutants: ozone, carbon monoxide (CO), $PM_{2.5}$, PM_{10}, and nitrogen dioxide. EPA partners with Department of Transportation (DOT) to implement conformity regulations.

The transportation conformity rule requires agencies completing project-level conformity determinations (including PM hot-spot analyses as described below) to establish a proactive public involvement process that provides opportunity for public review and comment (40 CFR 93.105(e)). In practice, this is often satisfied through the

NEPA public involvement process, since project-level conformity determinations are often completed in conjunction with the associated NEPA analysis. EPA encourages project sponsors to fully engage affected communities through the public process to ensure that transportation conformity requirements are met.

EPA is currently developing new guidance on how to complete quantitative "hot-spot analyses" of particulate matter ($PM_{2.5}$ and PM_{10}) emissions that can be used to analyze highway and transit projects and will improve the ability to estimate localized impacts of certain highway or transit projects, some of which may be associated with goods movement facilities. The draft guidance document, "*Transportation Conformity Guidance for Quantitative Hot-spot Analysis in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas – Public Draft,"* was released in May 2010 with a public comment period which closed July 19, 2010. The Environmental Justice mailing list was notified that the draft guidance was available for comment.

When final, this guidance will facilitate the completion of hot-spot analyses in PM_{10} and $PM_{2.5}$ nonattainment and maintenance areas for projects that involve significant levels of diesel vehicle traffic (or any other project identified in a $PM_{2.5}$ or PM_{10} SIP as a localized air quality concern), including projects such as new highways and intersections that serve large volumes of diesel trucks or freight terminals. Under the conformity rule, projects that require hot-spot analyses will have to quantitatively demonstrate that the project will not create new PM NAAQS violations, worsen violations, or delay timely attainment of the NAAQS or interim milestones. Presently, EPA requires only a qualitative analysis of transportation conformity requirements, but with the release of the MOVES2010 emissions model[12], it is now possible to develop guidance on completing quantitative PM analyses. Although the Clean Air Act (CAA) limits transportation conformity requirements to highway or transit projects receiving FHWA or FTA funding or approval, the modeling processes described by the guidance could be used to estimate emissions from other projects, such as those associated with goods movement not otherwise subject to the transportation conformity rule.

Incentives for Early Emissions Reductions: Clean Ports USA, SmartWay and the 2010-12 Ports Air Quality Plan

In addition to EPA's regulatory programs, OTAQ maintains two complementary non-regulatory programs for achieving improvements in air pollution from transportation sources and ports and other goods movement facilities; the National Clean Diesel Campaign (NCDC) and its associated programs and the SmartWay Transport Partnership. These programs facilitate federal, state and local initiatives, and leverage resources to mitigate pollution from goods movement operations. They also have succeeded in accelerating the modernization of existing diesel fleets used in freight operations.

[12] The MOVES model is discussed further in Section 7.

Clean Ports USA and SmartWay Transport Partnership

Clean Ports USA, established in 2005 as part of NCDC, is an incentive-based innovative program designed to reduce emissions from existing diesel engines such as trucks, vessels, locomotives, and nonroad equipment at ports. The SmartWay Transport Partnership, established in 2004, works with shippers and carriers of goods and others to reduce emissions from freight operations, with a focus on fuel efficiency improvements and the reduction of greenhouse gases. Led by OTAQ, other EPA Offices and the Regional Diesel Collaboratives coordinate with the Clean Ports USA and SmartWay programs to provide a wide array of technology solutions to reduce air pollution across the supply chain. The market-based incentives inherent in the SmartWay program design provide companies involved in goods movement a strong motivation to be early adopters of the best available fuel-saving technology on the market. Both programs promote idle reduction which can be a significant source of diesel pollution near truck stops and warehousing facilities.

For example, all Class 1 railroad and several shorthaul rail companies are SmartWay Partners and commit to annual reductions of both greenhouse gases and criteria pollutants. EPA is encouraging, through its grant programs, projects that will replace or repower locomotives ahead of schedule, install verified idle reduction technologies, and adopt other cleaner locomotive technologies. Some examples of EPA-funded rail projects that provide early reductions are:

- South Coast Air Basin, California: Upgrade 8 switcher engines
- Lincoln, Nebraska, retrofit 8 switcher engines in a residential area near a switchyard. The area is known for high asthma rates and low-income.
- New Haven, Connecticut, repowered a switcher locomotive.

2010-2012 Ports Air Quality Plan (The Plan)

In October 2007, at the Regional Leadership Forum (RLF) on the Environmental Implications of Port Operations and Growth, the then EPA Regional Administrators and EPA Assistant Administrators recognized the need for achieving air quality improvements at the ports. At that meeting, EPA's senior leaders crafted "The Sustainable Ports Strategy." The Strategy was intended as a guideline for actions that could be taken to reduce the environmental impacts at ports. Regions and Offices signed up to take a leadership or participating role in various actions. EPA held a meeting of the EPA Regional and Assistant administrators in July 2010 to educate them about the environmental and environmental justice implications of port operations and goods movement.

In January 2010, OTAQ revised and updated the air quality portions of the Agency's Strategy for Sustainable Ports, creating a 2010-12 Port Air Quality Plan. Although the NEJAC recommendations were not yet final, EPA

had been following the progress of NEJAC's Goods Movement Work Group and was able to consider in the plan some of the preliminary findings of the Work Group. This plan provides the framework for ensuring successful implementation of the Agency's efforts to reduce port related air pollution under NCDC. EPA regions and other offices across EPA also provided input. The plan builds from and complements:

- EPA's regulatory programs,
- NCDC Clean Ports USA partnership with the American Association of Port Authorities (AAPA),
- Maritime-related efforts of EPA's Regional Diesel Collaboratives,
- The SmartWay Transport Partnership , and
- Air quality action plans developed by individual North American ports.

The EPA Port Air Quality Plan stresses a collaborative approach with port communities, port and industry partners, state and local agencies, and environmental groups. It also recognizes the unique ability of EPA to provide technical assistance and leverage funding for improving air quality.

2010-12 Port Air Quality Plan Approach

To collaborate with port communities, governments, marine port authorities, shippers and carriers in the goods movement industry to promote sustainability and to minimize the negative effects of inter-modal marine and land-side goods movement on human health and air quality.

The Plan's objectives and action items are organized into three themes with sub-categories that mirror Administrator Jackson's 2010 priorities for EPA. The themes and main actions include the following:

- Taking Action on Climate Change and Improving Air Quality
  - Marine Port and Freight Focus on Diesel Emissions Reduction Grants, Innovative Funding, and New Technologies
  - Goods Movement Actions
  - Measuring Progress through Emissions Reductions and Cost-Effectiveness
  - General Collaborations and Communication
- Healthy Communities and Ecosystems: Environmental Justice Air Quality Actions
- The Global Environment

Each theme in the Plan contains actions that support or supplement EPA regulatory programs and build on existing programs. The Plan identifies specific milestones, target dates, outputs and measures. Many actions in the Plan directly address NEJAC recommendations. For example, as part of the Plan, several regional offices will work with communities and their ports to establish goals for air emissions reductions. Establishing air quality goals for goods movement centers was one of NEJAC's recommendations. EPA has already successfully accomplished this with the Ports of Los Angeles, Long Beach, Seattle, Tacoma, and New York and New Jersey. EPA continues to make progress with additional ports such as Charleston, Virginia, Baltimore, and Savannah.

EPA will continue to support and encourage ports to measure their progress and engage in meaningful dialogue with their communities. Appendix B contains the 2010-2012 Port Air Quality Plan.

The main feature of the overall Ports Plan is to promote emission reductions from marine ports and the associated transportation supply chain through the Diesel Emissions Reduction Program grants and the Regional Clean Diesel Collaboratives. Actions in the Plan will advance EPA's communication of the science and the impacts associated with climate change and criteria pollutants on communities. EPA will continue to work with OEJ and the Regional offices to address serious public health concerns associated with freight distribution across the US. EPA will promote the use of our Diesel Emissions Reduction program and SmartWay partnership tools to cut air pollution through the entire system of transportation facilities, seaports, railways, truck lanes and border facilities. EPA will work with the OEJ to encourage grant applications from eligible entities that can affect emissions reductions in port and goods movement communities. EPA will also consider how to get more applications from eligible community organizations in future grant competitions.

Chelsea, Massachusetts, is an example of a community where Clean Diesel funding is reducing diesel emissions. Chelsea is a densely populated town outside of Boston, home to some of the state's highest concentrations of newly arrived immigrants and economically disadvantaged constituencies. Because of its harbor-side location, access to the city, and large industrial zones, Chelsea is the site of a disproportionate share of activities that generate unhealthy soil, water, and air pollution. The Chelsea Collaborative, a local nonprofit, has played a key role in successfully rallying the community to take local air quality issues into its own hands. In June of 2009, EPA awarded a $1.56 million grant to the Collaborative to undertake a major repower initiative at a local produce center. The New England Produce Center in Chelsea represents an enormous source of diesel pollution in the city. Each day, approximately 2,500 trucks visit the produce center. Due to the high volume of goods coming in and out of the facility each day, operators use cold and warm storage trucks that are docked at the building. These stationary storage areas use climate controllers powered by old diesel-powered engines to keep food at optimal temperatures.

A Chelsea Collaborative employee reached out to the Center's managers and brought about the innovative partnership. Under the grant, resident businesses at the produce center provide a partial cost-share for 79 trailers to be repowered to run on electricity off the grid instead of using high sulfur-containing diesel. To increase cost effectiveness of the project, the Chelsea Collaborative selected the trailers that will maximize the longevity of the emissions reductions. With 37 individual businesses on board in the produce center project alone, this initiative represents a cross-cutting partnership. The Chelsea Collaborative success in reducing a persistent source of diesel pollution at the produce distribution center in Chelsea demonstrates how use of clean diesel funding can improve the quality of life in a community impacted by a goods movement distribution center.

Expanded Enforcement

Environmental justice (EJ) considerations, including those arising from centers of goods movement, are already an integral part of EPA's targeting and prioritizing cases. EPA will continue to investigate and take appropriate enforcement action, if necessary, to address emissions from major sources, including goods movement facilities that have a significant impact on nearby communities.

By way of example, EPA's Office of Enforcement and Compliance Assurance's Air Enforcement Division, Region 6 and Houston have collaborated to develop a monitoring/surveillance/enforcement strategy to address concerns of high levels of hazardous air pollutants (HAPs) in and around the Houston area. In November 2007, the city's Mayor and Health Director requested EPA's participation in addressing benzene emissions by developing a risk based approach to conducting real time monitoring, surveillance, and compliance activities. EPA designated Houston as an authorized representative in February 2008, which authorized the city to enter onto the premises of major emission sources to support EPA with inspection and monitoring activities. Houston signed a confidentiality agreement with EPA in September 2008 in order to participate in enforcement activities related to the initiative. Activities included fence-line monitoring, and if a benzene plume was identified, EPA and Houston followed up with an on-site visit to monitor and help detect potential specific sources, followed by information requests and enforcement, if appropriate.

EPA will continue to pursue supplemental environmental projects, which are projects financed by EPA enforcement actions, to obtain additional emission reductions associated with goods movement. These supplemental environmental projects can be used in settlement of an EPA enforcement action to offset civil penalties that a company might otherwise have to pay. However, EPA cannot divert civil penalty payments from the U.S. Treasury toward diesel cleanup projects or other similar projects.

Finally, a number of EPA regions have targeted enforcement efforts in communities impacted by goods movement. For example, EPA Region 9, California EPA, the South Coast Air Quality Management District, and other partners have created a Los Angeles Area Enforcement Collaborative targeting facilities along the Interstate-710 corridor, which is heavily impacted by goods movement out of the Ports of Los Angeles and Long Beach. Members from communities along the corridor join local, state and federal officials on tours through their communities to identify concerns and issues with facilities located near their communities. Agencies then investigate community concerns with the facilities and report back to the communities.

Section 5
Land Use Planning and Environmental Review
(Response to Recommendations 22-23, 25-27)

The NEJAC report points out the importance of land use decisions and policies in preventing and reducing air pollution associated with goods movement facilities and the impacts of the facilities on sensitive populations. EPA does not have authority over land use policy, and the federal government has very limited authority in this area generally. However, EPA does have programs and requirements under the CAA such as transportation conformity, and State Implementation Plan requirements, as well as requirements under National Environmental Act (NEPA) review that can influence land use decisions. In addition, EPA performs an important role by providing tools to assess the impact of alternative land use planning scenarios.

The NEJAC report makes various recommendations regarding using both NEPA and CAA programs and tools to the fullest extent possible. This includes making information from these programs more publically available. NEJAC also suggests updating existing guidance and developing new guidance addressing the relationship between land use and air quality especially as it applies to sensitive receptors such as schools and hospitals.

The activities below directly address many of NEJAC's recommendations.

National Environmental Policy Act (NEPA)

NEPA requires consideration of the cumulative impacts of proposed federal actions (including goods movement projects) on the environment, including the potential impacts on air quality, water resources, and soil. In addition, the socioeconomic impacts of the proposed project must be considered, including those related to environmental justice. EPA's Office of Federal Activities (OFA) has worked with OTAQ to develop guidelines for EPA NEPA reviewers to evaluate the impacts of goods movement in NEPA reviews. Comment letters written by EPA in conjunction with EPA's review authority for NEPA documents under Section 309 of the Clean Air Act are publicly available at http://www.epa.gov/compliance/nepa/eisdata.html. In addition, most Regional websites make these comment letters available on a Region-specific basis.

The public process required by NEPA offers an ideal forum to address community concerns related to a specific proposed goods movement project. EPA encourages federal agencies to consider collaborative decision-making within the NEPA process, and notes that the Council of Environmental Quality has released guidance on incorporating collaborative elements into NEPA processes.[13]

[13] See "Collaboration in NEPA: A Handbook for NEPA Practitioners" (CEQ, October 2007).

EPA's Environmental Justice Executive Steering Committee (now part of the Executive Management Committee) chose Goods Movement and Air Toxics as one of the top five priority areas for action in fiscal years 2009 and 2010. As part of this priority, EPA formed an Agency-wide Goods Movement/Air Toxics Workgroup, which in turn identified two overarching goals, with associated actions, for EPA. One of these is: "*Inventory and share innovative mitigation measures used in goods movement projects to provide early input to projects (infrastructure) impacting communities in goods movement corridors"*. The activities EPA is undertaking to implement this goal are:

- Ensuring the NEPA process fully considers the impact of new transportation and other goods related infrastructure projects on communities by educating our partners at DOT, the U.S. Army Corps of Engineers and other agencies to understand the negative impacts of goods movement at the community level.
- Ensuring NEPA reviewers understand and consider the risks of goods movement on communities when conducting NEPA reviews and evaluating alternatives in project design.

Transportation Conformity

Transportation conformity is a Clean Air Act requirement to ensure that federal supported highway and transit activities are consistent with (in other words conform to) the purpose of the SIP. Conformity to the purpose of the SIP means that a transportation activity will not cause or contribute to new air quality violations; worsen existing violations; or delay timely attainment of the national ambient air quality standards or any interim milestone. Transportation conformity applies in nonattainment and maintenance areas for transportation-related pollutants: ozone, carbon monoxide (CO), $PM_{2.5}$, PM_{10}, and nitrogen oxides.

The transportation conformity rule (40 CFR parts 51 and 93) requires that conformity determinations be based on the latest motor vehicle emissions model approved by EPA. In December 2009, EPA released MOVES2010, a state-of-the-art upgrade to EPA's modeling tools for estimating emissions from cars, trucks, motorcycles, and buses. Based on analysis of millions of emission test results, MOVES2010 considerably advances EPA's understanding of vehicle emissions. MOVES2010 represents a considerable advance in the ability to estimate on-road emissions associated with goods movement facilities for transportation conformity and other purposes.

MOVES2010 also makes it possible to develop guidance for conducting "hot-spot" analyses for certain transportation projects (including those associated with goods movement). This guidance was described previously in Section 4 and is summarized later in this section. The draft guidance was developed in coordination with DOT, EPA's federal partner in implementing the transportation conformity program.

Interagency Coordinated Efforts - HUD-DOT-EPA Interagency Partnership for Sustainable Communities

On June 16, 2009, EPA joined with the U.S. Department of Housing and Urban Development (HUD) and the U.S. Department of Transportation (DOT) to help improve access to affordable housing, provide more transportation options, and lower transportation costs while protecting the environment in communities nationwide. Through a set of guiding livability principles and a partnership agreement that will guide the agencies' efforts, this partnership will coordinate federal housing, transportation and other infrastructure investments to protect the environment, promote equitable development, and help to address the challenges of climate change. This partnership is addressing some issues related to regional transportation and land use planning. For example, after consultation with EPA, DOT and HUD launched a joint effort in June, 2010. This effort combines $75 million in DOT TIGER II and HUD Sustainable Community Challenge Grant Investments for localized planning activities that lead to projects that integrate transportation, housing and economic development, and planning or design for surface transportation projects that would be eligible for funding under the TIGER II Discretionary Grant program. The types of projects considered for funding include "planning activities related to the development of a freight corridor that seeks to reduce conflicts with residential areas and with passenger and non-motorized traffic." In this type of project, DOT might fund the transportation planning activities along the corridor, and HUD might fund changes in the zoning code to support appropriate siting of freight facilities and route the freight traffic around town centers, residential areas and schools."

Federal Guidance

Land Use

In 2001 EPA released a guidance document entitled *"Improving Air Quality Through Land Use Activities"* (EPA420-R-01-001, January 2001) which described how to use existing EPA regulations and policies to account for the air quality benefits of land use activities. The document included general guidance on quantifying the potential benefits of land use activities when determining air quality impacts. EPA will consider the NEJAC recommendations regarding goods movement activities and mitigation of emissions from these activities in any future revision to the guidance.

Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas

As described in Section 4, the release of the MOVES2010 emissions model has made it possible to develop guidance for conducting quantitative "hot-spot" analyses for certain transportation projects. A draft guidance document, "*Transportation Conformity Guidance for Quantitative Hot-spot Analysis in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas – Public Draft",* was released in May 2010 with a public comment period

which closed July 19, 2010. The Environmental Justice mailing list was notified that the draft guidance was available for comment. Once finalized, this guidance will help state and local agencies complete quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses for project level transportation conformity determinations of certain highway and transit projects, including some associated with goods movement.

Mobile Source Air Toxics in NEPA Review

Since the publication of FHWA's Interim Guidance on Air Toxics Analysis in NEPA in 2006, EPA's Office of Federal Activities issued the Interim NEPA/Clean Air Act Section 309 Diesel Emissions Guidance. This guidance is intended for internal EPA use by EPA personnel involved in the review of NEPA documents for federal actions that have potential impacts associated with diesel emissions. However, the guidance addresses many of the pollutants and issues associated with goods movement.

EPA has had significant interaction with FHWA on the subject of mobile source air toxics (MSATs) in NEPA documents dating back to 2003, when EPA reviewed an initial draft of FHWA's 2006 interim guidance. FHWA plans to revisit the guidance considering the recent release of MOVES2010. EPA will work with FHWA on future revisions to the guidance, especially as it relates to MOVES2010 and NEJAC's recommendations.

Sensitive Receptor Guidance

EPA is in the process of preparing guidance on environmental and energy considerations in school sitings. This guidance will address the environmental issues associated with schools located near large roads or other transportation facilities.

In July 2009, EPA convened a special School Siting Task Group (SSTG) under the existing Children's Health Protection Advisory Committee (CHPAC) to provide early input to EPA on the content of the draft siting guidelines. The Task Group was comprised of representatives from a wide range of national, state, tribal, and local organizations. As with all guidance, there will be opportunity for communities to comment in December of 2010 when the draft guidance is published. The guidance will be final in June 2011.

Guidance on Incorporating Environmental Justice into NEPA

OFA is currently undertaking a review of the *Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* to determine whether it needs to be updated and, if so, which areas are in need of additional attention.

Section 6
Technology
(Response to Recommendations 28, 30)

Retrofit technology to reduce emissions from on-highway trucks is readily available in the commercial market. However, fewer technologies are available to reduce emissions from marine and locomotive applications. Both the SmartWay Transport Partnership and NCDC have been working to encourage new technologies for these applications over the past several years, but more needs to be done.

NEJAC's report pointed out mandatory measures often "do not support the pace of change that impacted communities would expect for cleaner air." In order to meet the urgency for cleaner air, NEJAC recommended that EPA provide incentives for quicker action like encouraging states to include voluntary diesel reductions in their SIPs. NEJAC also emphasized the importance of advancing new clean diesel technologies. It also suggested that EPA do its own research to develop and accelerate commercialization of technologies that benefit goods movement communities.

Accounting for Accelerated Deployment of Clean Technologies in SIPs

EPA encourages states to account for emission reductions in SIPs due to the deployment of cleaner technologies and other control measures. EPA continues to believe that the latest and best emissions models and data must be used to ensure that the emissions reductions given for individual control measures are as accurate as possible.

The CAA presently requires that any control measures used in SIPs be quantifiable, surplus (i.e., not already being relied upon to meet attainment requirements), permanent, federally enforceable and adequately supported (e.g., by funding, personnel, or regulations).

The CAA also gives EPA authority to approve voluntary mobile source measures in a SIP for emissions control credit. This is subject to a commitment by the state to monitor, evaluate, and report the resulting emissions effect of the voluntary measure. EPA guidance limits the percentage voluntary measures can contribute to total projected future year emissions reductions required to attain the appropriate NAAQS. The total amount of emissions reductions from voluntary measures has presumptively been limited to three percent of the statutory requirements of the CAA with respect to any SIP submittal to demonstrate progress toward, attainment of, or, maintenance of the NAAQS. (See EPA memorandum *"Guidance on Incorporating Voluntary Mobile Source Emission Reduction Programs in State Implementation Plans (SIPs),"* November 24, 1997. EPA acknowledges that some areas may be able to demonstrate that voluntary measures may achieve credible reductions higher than the three percent cap; in that case, EPA will evaluate any such proposal on a case-by-case basis.

In addition, EPA continues to develop and support models, initiatives and guidance to help accurately quantify and address air quality concerns associated with goods movement, such as:

- Developing, refining, and supporting the latest emission models (such as MOVES2010, released in December 2009) to support the accurate quantification of air quality impacts of proposed goods movement projects.

- Developing guidance on how states can reduce emissions through retrofitting and replacing diesel vehicles and engines; this guidance also describes how states can quantify these benefits for SIP and conformity purposes. See *"Diesel Retrofits: Quantifying and Using Their Benefits in SIPs and Conformity: Guidance for State and Local Air and Transportation Agencies"* (EPA420-B-06-005, June 2006) and *"Guidance for Quantifying and Crediting Locomotive Idling Emission Reductions"* (EPA420-B-04-002, January 2004).

- Providing information on quantifying emission reductions from the use of technologies which reduce long duration truck idling emissions. These emission reductions may be used either to meet state implementation plan requirements such as reasonable further progress or attainment or in transportation conformity determinations. See *"Guidance for Quantifying and Using Long Duration Truck Idling Emission Reductions in State Implementation Plans and Transportation Conformity,"* (EPA420-B-04-001, January 2004).

- Describing how to quantify and use reductions in nitrogen oxides (NOx) that result when trucks are outfitted with two specific SmartWay fuel-efficient technologies: trailer aerodynamic kits and low-rolling resistant tires. See *"SmartWay SIP and Conformity Guidance,"* (EPA420-B-07-004, June 2007).

Emerging Technology and Technology Verification Programs

<u>EPA's Emerging Technology Program</u>

EPA developed the Emerging Technologies Program to advance new, cutting edge technologies that reduce diesel emissions prior to commercialization or before being fully verified for use under a DERA grant competition program. EPA provides funding for emerging technologies to demonstrate reductions under real world conditions. All technologies on the Emerging Technologies List must seek full verification within a one to two year period. To date, EPA has approved 14 technologies for placement on the Emerging Technologies List and several are ready to seek full verification. Eleven of the technologies target nitrogen oxides (NOx). This is crucial, as there are

currently few verified strategies that target the reduction of NOx. Other technologies target the reduction of particulate matter from marine vessels and locomotive engines, which will benefit the communities near ports and rail yards.

EPA's Technology Verification Program

The NCDC and SmartWay programs, along with the California Air Resources Board (CARB) coordinate on evaluating the emission reduction and fuel saving capabilities of a given technology. NCDC's verification process includes a thorough technical review of the technology as well as tightly controlled testing to quantify statistically significant levels of emission reductions. It is designed to allow the manufacturer to demonstrate retrofit technology effectiveness on a number of engine applications. One important required element of the process is the in-use testing component. This confirms that the technology is performing in real world usage as claimed by the manufacturer and acts to confirm the percent reduction attributable to the device or technology. In-use testing is performed during two different stages of the useful life of the technology. This in-use test element is critical to whether the product will remain on EPA's Verified Technology List.

Under the SmartWay program, EPA evaluates the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. These technologies, such as idle reduction and aerodynamic devices on tractors and trailers, are certified by EPA and are eligible to include the SmartWay certification mark.

Over the past several years, EPA made a concerted effort to verify technologies for use in goods movement. Between EPA and CARB's verification lists, there are more than 13 technologies approved for use in nonroad applications and 19 approved for on-highway applications.

EPA also verifies Idling Reduction Technologies which can be very effective in reducing emissions at goods movement facilities. Idle reduction technology allows engine operators to refrain from long-duration idling of the main propulsion engine by using an alternative technology. An idle reduction technology is generally defined as a technology or device that is installed on a vehicle (e.g., bus, truck, locomotive, automobile, marine vessel, equipment, etc.) or at a location. It reduces unnecessary main engine idling, and/or is designed to provide services (e.g., heat, air conditioning, and/or electricity) to the vehicle or equipment that would otherwise require the operation of the main drive engine while the vehicle or equipment is temporarily parked or remains stationary.

EPA will continue to work with manufacturers to verify technologies for different types of engines and vehicles. All EPA SmartWay and NCDC verified technologies are listed on the NCDC and SmartWay websites and this list is continuously updated as new equipment is made available and verified.

EPA Technology Research

EPA's National Vehicle, Fuels and Emissions Laboratory (NVFEL) has a number of advanced research projects developing technologies that can be used in goods movement operations. The most significant of these efforts involves the hydraulic hybrid technology, a NVFEL-patented technology. [See: http://www.epa.gov/otaq/diesel/documents/420f09051.pdf]. This technology reduces criteria pollutants such as particulate matter and oxides of nitrogen as well as fuel consumption. This technology is being used in urban delivery trucks such as UPS and FedEx fleets. EPA is also working in partnership with the Port of New York/New Jersey, APM Terminals North America, and industry to demonstrate the hydraulic hybrid technology on a port yard hostler.

The EPA, the California Environmental Protection Agency, the California Air Resources Board, the South Coast Air Quality Management District, and the San Joaquin Valley Air Pollution Control District are undertaking a Clean Air Technology Initiative. The principal goal is to improve air quality by aligning agency research resources, where possible, by evaluating innovative and emerging emission reduction technologies and choosing technologies on which to collaborate in order to accelerate development and deployment. The Initiative includes two technology demonstration areas: the City of San Bernardino in the South Coast and Kern and Tulare Counties in the San Joaquin Valley. The technologies identified for demonstration include:

- Distribution Center Technologies (e.g. fuel cell forklifts, electric trucks)
- Locomotive Technologies (e.g. emissions capture, selective catalytic reduction (SCR))
- Airport Technologies (e.g. electric ground support equipment, electric shuttle busses and taxis)
- Transit and Downtown Technologies (e.g. electric transit busses, hydraulic hybrid package delivery trucks)
- Schools and Public Facilities (e.g. air filters in schools near highways and major materials)
- Off-road and Farm Equipment (e.g. anti-idling, hybridization)
- Area Source Demonstration Projects (e.g. Lower NOx school boilers, cleaner residential furnaces)
- Heavy-duty Trucks (e.g. SCR retrofit)
- Energy and Agriculture (e.g. cleaner dairy digester engines, high temperature fuel cells)

Section 7
Environmental Performance, Planning and Management

(Response to Recommendations 31-32, 34)

The NEJAC report acknowledges the importance of incorporating environmental considerations in ongoing decision making and organizational planning. NEJAC advocates for "holistic" plans such as those formulated at the San Pedro Bay Ports or the Northwestern Ports of Seattle, Tacoma and Vancouver. The report makes specific recommendations regarding promotion of Environmental Management Systems to improve environmental performance and encouraging the use of corporate modeling and management tools to measure corporate environmental footprints. Further, NEJAC advocates funding of pilot programs that use a holistic approach to environmental justice issues in goods movement communities.

Measuring Environmental Performance

One of the key roles EPA plays is to provide tools to estimate and measure emissions and environmental performance. These tools are described below.

MOVES2010

In December 2009, EPA's Office of Transportation and Air Quality (OTAQ) released the **MO**tor **V**ehicle **E**mission **S**imulator (MOVES2010) emissions model. MOVES2010 is the state-of-the-art upgrade to EPA's modeling tools for estimating emissions from highway vehicles, based on analysis of millions of emission test results and considerable advances in the Agency's understanding of vehicle emissions. MOVES2010 estimates volatile organic compounds (VOCs), nitrogen oxides (NOx), carbon monoxide, direct particulate matter (PM_{10} and $PM_{2.5}$) and other precursors from cars, trucks, buses, and motorcycles. MOVES2010 was developed to replace EPA's previous emissions model, MOBILE6.2.

MOVES2010 improves upon MOBILE6.2 in several key respects. For example, MOVES2010 is based on a review of the vast amount of in-use vehicle data collected and analyzed since the release of MOBILE6.2, including millions of emissions measurements from light-duty vehicles. Analysis of this data has enhanced EPA's understanding of how on-road mobile sources contribute to emissions inventories, and has also improved the agency's understanding of the relative effectiveness of various control strategies. MOVES2010 has a database-centered design that allows users much greater flexibility in organizing input and output data. This structure also allows EPA to update emissions data incorporated in MOVES2010 more easily. The improvements in MOVES2010 also allow analysis of emissions at the local scale or project level.

EPA plans to add a non-highway mobile sources module to a future release of MOVES. In the meantime, EPA's NONROAD2008a model can be used to estimate emissions from most categories of nonroad equipment used in freight operations.

SmartWay and NCDC Measurement Tools

The SmartWay Transport Program and its emissions calculators create a market incentive for freight carriers to improve efficiency, reduce emissions and improve environmental performance. EPA's SmartWay Transport partners commit to improve their energy efficiency, reduce greenhouse gas emissions and improve air quality. EPA actively engages with shippers, trucking firms and rail companies to enroll them as partners in the SmartWay Transport Partnership. Companies that join SmartWay are required to use EPA's FLEET calculator tools to evaluate the emissions footprint of their freight operations and to set goals for improved performance. At this time, the SmartWay program is working with over 2700 companies and that number covers more than 459,000 trucks. The SmartWay FLEET calculators have become the industry standard for assessing freight efficiency and measuring environmental performance.

EPA is committed to understanding the goods movement industry's environmental performance and to exchange ideas and practices to improve performance. The SmartWay program, like all of the Agency's innovative programs to improve the movement of freight, works with companies striving to improve their management of environmental issues and increase profits at the same time. The SmartWay program plans to continue to build on its foundation by providing a systematic way to review and improve operations for better environmental performance to help a company move freight more efficiently and streamline operations. SmartWay is exploring a new supply chain accounting system that includes replacing the initial FLEET Performance models and developing a new suite of partner calculator tools. These new emissions assessment and tracking tools could cover a broader range of the goods movement system, and open new partnership opportunities for freight providers across the supply chain.

In addition to the suite of SmartWay assessment tools like FLEET, another way that EPA makes it easier to encourage emissions reductions and track progress is through its online Diesel Emissions Quantifier (DEQ). [See:http://cfpub.epa.gov/quantifier/view/index.cfm]. The DEQ is an interactive tool to help state/local governments, fleet owners/operators, school districts, municipalities, contractors, port authorities and others estimate emission reductions and cost effectiveness for clean diesel projects. As a recent addition to the DEQ, EPA has created a health benefits module, which translates the predicted emission reductions into estimated health and monetary benefits for the projects.

Environmental Management Systems (EMS)

Environmental performance of both private and governmental organizations can be significantly improved by systematically incorporating environmental considerations and decision-making into daily operations and long term planning. The ability to do so is enhanced by measurement tools that can assess environmental performance as well as implementation of comprehensive Environmental Management Systems (EMS).

Several years ago, EPA's former Sector Strategies Program worked with the American Association of Port Authorities (AAPA) and the Global Environment and Technology Foundation (GETF) to develop a training program to help ports develop EMSs. As a result of this program, many ports developed EMSs, and several are ISO14001 certified (the international standard for EMSs). The tools developed during this program are posted on http://portcompliance.org/ems.cfm

Clean Ports USA program, under the Office of Transportation and Air Quality, now works closely with the American Association of Port Authorities (AAPA). One goal of that program is to improve EMS programs at U.S. ports. EPA's SmartWay Transport Partnership program sets performance standards for major shippers and freight owners to reduce the impact of shipping goods. EPA has already made substantial progress in encouraging Leadership in Energy and Environmental Design (LEED)-like programs at ports. For example, as part of the Puget Sound Clean Cities Coalition, EPA has successfully promoted the application of an Evergreen Fleets Standard for port-related trucking and drayage fleets and off-road cargo handling equipment. Similarly, under the 2010-2012 Port Air Quality Plan, EPA has established a broad set of goals for promoting emissions reductions, through EPA's SmartWay program and by focusing on a supply chain approach. All of these efforts provide critical support to the broader goals of continued comprehensive environmental improvement.

NEJAC encourages EPA to fund pilot programs using a holistic approach to reducing environmental impacts of goods movement which would include public participation in EMS planning and EPA funded technical assistance review of EMS tools used by organizations involved in goods movement in a particular geographic area. While EPA has limited resources available to address these recommendations, the Environmental Justice Showcase Community program is using a holistic approach to environmental issues at the community level.

Section 8
Resources, Incentives and Financing
(Response to Recommendations 35-41)

Funding to clean up the existing diesel fleet comes from a variety of sources; federal, state and private. Although available funding for diesel retrofits has grown significantly over the past 5 years, it is not enough to fully fund new technology fleets.

NEJAC recognized the importance of employing private as well as federal resources in funding timely and comprehensive solutions to goods movement impacts. NEJAC also recommends increased federal funding, public-partnerships with EPA and other Agencies to provide funding assistance, and the establishment of innovative financing authorities such as the State Air Quality Finance Authorities which offer low interest loans as recommended by EPA's Environmental Financial Advisory Board.

The National Clean Diesel Campaign's Regional Clean Diesel Collaboratives provide the primary mechanism for developing partnerships to mitigate diesel emissions associated with EPA's goods movement. The following describes resources available for encouraging new technologies and reducing emissions from the in-use fleet of engines and vehicles.

Diesel Emission Reduction Program Grants and SmartWay Finance Grants

EPA received funding from Congress under the Diesel Emission Reduction provisions (referred to as DERA) in the Energy Policy Act of 2005 (EPAct 2005) and also under the American Recovery and Reinvestment Act (ARRA) which provided additional funding for implementing DERA. EPA received a total of $ 470 million for diesel reductions since 2008. Some of this money is passed directly to the states to implement diesel reduction programs at the state level. The President's budget for fiscal year 2011 includes a request for an additional $60 million. DERA will need reauthorization for the program to continue beyond 2011 and is generally oversubscribed. For example, EPA received over $2 billion in requests for approximately $180 million in national grants under ARRA's allocation for DERA.

National Diesel Emissions Reduction Grants

EPA uses the DERA funds to encourage the accelerated development and deployment of lower emitting technologies and effective mitigation strategies in the goods movement sector. EPA does this through its national clean diesel funding assistance program. These grants prioritize projects for funding that benefit areas "that receive a disproportionate quantity of air pollution from diesel fleets; including truck stops, ports, rail yards,

terminals and distribution centers". The grant selection process also prioritizes projects developed through collaborative stakeholder processes.

In 2008 and 2009, over 90 projects were funded through DERA in EJ areas totaling over $120 million. Many of these projects reduced emissions from goods movement and directly benefit goods movement communities even if the communities are not the direct recipient of the funding[14]. Others reduce pollution in goods movement communities by addressing emissions from school and transit buses, construction or agricultural equipment, or municipal fleets. DERA projects often involve public-private partners which significantly leverages federal funding. These partnerships provide flexible financing options as well as informational outreach and technical assistance. Appendix C includes a list of projects funded through DERA.

Tribal Diesel Emissions Reduction Grants

EPA ran a special competition designed to respond to the tribes' need for smaller grants with its fiscal year 2009 and 2010 DERA funds. To make grants more accessible to tribes and their smaller fleet needs, EPA reduced the application minimum to $30,000 for tribal applicants. EPA's extensive outreach to tribes included articles on the online Tribal Air Newsletter, participation in the EPA Tribal Air Coordinators Conference and participation in teleconferences with the National Tribal Air Association to encourage tribal applicants. A special Tribal Review Panel reviewed the tribal grants separately from non-tribal competitive applications. Four tribes will be awarded funding totaling over $650,000.

Should EPA receive the requested DERA funding for 2011, EPA will consider offering smaller grants for tribes and solicit applications from not-for-profit community organizations that are eligible under EPAct 2005 to receive funds.

SmartWay Finance Grants

EPA's SmartWay Finance Program specifically maximizes the deployment of fuel saving and emission reduction technologies in the market. SmartWay Finance provides funding assistance to create finance programs such as low-cost leases or revolving loan programs, to achieve significant reductions in diesel emissions. Eligible entities can work with private lenders to offer financing by using federal grants as seed money to provide better loan rates or terms. The program encourages banks and lending institutions to provide loans to owner-operators and small fleet owners to retrofit their equipment or purchase newer, cleaner tractors and trailers at affordable rates, thus accelerating the turnover rate of trucks and getting older, dirtier equipment off the road faster. The SmartWay

[14] According to the statute, not-for profit organizations, such as community organizations, are eligible to receive DERA grants as long as they either have as their primary purpose the promotion of transportation or air quality or are a not-for-profit organization that represents groups of fleet owners (i.e. the National School Transportation Association)

Finance Center helps truck owners, truck stop owners, rail companies and marine companies find financing for cleaner technology.

Through its SmartWay Finance Program, EPA has entered into several financial agreements with non-profit entities to initiate low cost loan programs under DERA. To help get the word out, EPA developed the SmartWay Finance Center web portal to expedite access to commercial loans for trucks and equipment (e.g., one application provides access to multiple lenders). [See www.smartwayfinancecenter.com]. Examples of projects funded through the SmartWay Finance Program include:

- $9 million to the Houston-Galveston Area Council for a bridge loan program to support clean drayage transportation and help the Houston-Galveston-Brazoria region attain the 8-hr ozone standard and reduce emissions of hazardous air pollutants;
- $2 million for the Louisville/Jefferson Country Metro Government to establish a revolving loan program that encourages owners of nonroad diesel equipment to replace, repower or retrofit their older diesel equipment to maximize diesel emission reductions; reduce emissions of PM2.5, ozone precursors and hazardous air pollutants; and
- $9 million for the Cascade Sierra Solutions revolving loan fund designed to help owner/operators lease-to-own new, clean, SmartWay certified tractors and trailers with idling reduction technologies and top-notch aerodynamics

Funding for SmartWay Finance has come from DERA. However, SmartWay is planning to contact FDIC to explore options for how SmartWay-type loans can help banks qualify for Community Reinvestment Act credit in hopes of increasing participation from private lenders.

Appendix C lists DERA and ARRA grants, including the tribal and SmartWay finance grants affecting environmental justice areas.

Funding in Partnership with Other Federal Agencies

EPA has partnered with the Department of Justice to obtain settlements that include Supplemental Environmental Projects (SEPs) to reduce diesel emissions. EPA has also partnered with the Department of Transportation to promote the use of Congestion Mitigation and Air Quality (CMAQ) funding to reduce diesel emissions. Much of EPA's work with other federal and state agencies takes place at the regional level through EPA's regional offices and Regional Clean Diesel Collaboratives. In addition to promoting SEP and CMAQ funding strategies, EPA's regional efforts include partnering with agencies to create contract language requiring the use of retrofitted construction equipment and collaborating with the Department of Energy's Clean Cities program to promote alternative fuel infrastructure to reduce diesel emissions.

A few examples of SEP and CMAQ funded projects include:

- $500,000 in CMAQ funding to install 50 truck stop electrification units near Oak Grove, Kentucky, an area with a high minority, low income population. This equipment allows truck drivers to completely shut down the truck's engines resulting in an estimated emission reduction of over 1700 tons annually. [See: www.fhwa.dot.gov/environment/cmaqpgs/safetealu1808/index.htm]
- $1.8 million in CMAQ funding to install soot filters on 235 local buses in Philadelphia, Pennsylvania, an area with a high minority, low income population. Each bus averages 27,200 miles per year. Emission reductions are estimated to be 60% for PM. [See: www.fhwa.dot.gov/environment/cmaqpgs/safetealu1808/index.htm]
- $1.5 million in SEP funding to install idle reduction equipment on switch yard, shorthaul and steelyard locomotives in an intensely industrial part of Detroit. This is in an area with a high minority, low income population. In addition, one of the rail yards is adjacent to a public school. Emissions reductions are estimated to be 29 metric tons of NOx and 1.3 metric tons of PM per year.
- $1.2 million in SEP funding to upgrade the non-regulated engines of a passenger/vehicle ferry with EPA certified Tier 2 engines. The ferry runs between Long Island, New York and New London, Connecticut an area with a high minority, low income population. In addition, the ferry company will voluntarily replace 500 ppm sulfur diesel fuel with Ultra Low Sulfur Diesel (ULSD) (15ppm), approximately two years before this is required by regulation. Emissions reductions are estimated to be 35.5 tons of NOx and 2.8 tons of PM per year.

EPA will continue to look for opportunities in settlements to obtain agreement on supplemental environmental projects, such as diesel retrofits, which have the potential to mitigate emissions around goods movement centers. Because SEPs are part of an enforcement settlement, they must meet certain legal requirements and several EPA guidelines before they can be approved (e.g. it must not be otherwise legally required, it must provide measureable reductions, etc.).

EPA would welcome goods movement project ideas from interested parties for inclusion in EPA's list of Project Ideas for Potential Supplemental Environmental Projects. EPA may use ideas on this list in future enforcement cases in which a SEP may be considered as part of settlement discussions.

EPA also looks forward to working with DOT and HUD to fund goods movement activities through the Interagency Partnership for Sustainable Communities.

Appendix A
NEJAC Goods Movement Recommendations

Community Facilitated Strategies and Collaborative Governance
(Section 2 Recommendations 1- 6)

1. EPA should promote decision-making processes that empower impacted community and tribal stakeholders through collaborative problem-solving approaches that include:
    - implementing a comprehensive outreach strategy by which to deploy the use of community facilitated strategies in communities where goods movement operations have been identified by EPA as high priority (see complementary recommendation in section 3.3 ,
    - implementing new policies that support community-owned and managed research data within impacted communities and tribal areas, and include social, economic, cultural, and community health factors (Regulatory and Enforcement Mechanisms). Such a strategy must be transparent and accountable. It will also ensure that community stakeholders are included in advisory, planning, and decision-making,
    - Evaluating and updating its EPA public participation approaches related to its effectiveness within communities affected by goods movement activities. A starting point would be the updated recommendations put forth by the NEJAC in its Model Plan for Public Participation (1994).
    - EPA should encourage other federal agencies to adopt these recommendations.
    - Taking the lead in evaluating and validating the “community voice” and promoting a shift towards community-based approaches to capacity building, funding, and collaborative problem-solving.

2. EPA should ensure that sustainable resources are available to increase the capacity of the community- and tribal-based organizations to participate in both traditional public participation processes and CFSs from within impacted communities and tribal territories. Community capacity includes the ability to document community-driven data collection, produce reports of results, and present evidence in informed manner, with the assistance of legal, research, and technical experts. Some examples include workshops and trainings for the CFS participants about related issues. These resources should be monitored to ensure the sustainability of funding equity and management parity for community and tribal based environmental justice organizations.

3. EPA should engage environmental justice areas and their locally based organizations to prioritize goods movement activities and related risks using the community facilitated strategy as a tool to address site-specific concerns. Human exposures, health effects and care as well as risks to impacted stakeholders’ residential, business, and public properties should be among those priorities and concerns.

4. EPA should support, encourage, and, where appropriate, co-fund collaborative governance processes relating to goods movement issues at both regional and community levels. Initially, EPA should co-fund several demonstration projects. EPA should seek commitments by federal and state agencies, regional organizations, municipalities, goods movement entities, foundations, and others to help fund these processes and the projects that are agreed upon. However funded or convened, these processes should assure that all appropriate participants should be included.

5. EPA should take the lead to get other federal agencies to provide scientific and technical advice to these processes and to assist in implementing agreements. EPA should encourage all the participating federal, state and local agencies to coordinate their authorities, technical assistance, and investments

6. EPA should assist in identifying and supporting collaborative governance and consensus programs, private neutral facilitators, or equivalent experts to assist in process design, support to conveners, management, and facilitation. There is a network of mostly university-based centers that have experience both in traditional conflict resolution and in the emerging field of collaborative governance. These centers, as well as others that may be more conveniently located to the community, could serve as the neutral forum and provide process management and facilitation.

Health Research Gaps and Educational Needs
(Section 3 Recommendations 7-14)

7. EPA should establish, for the port and rail sectors, a list of the largest ports and rail yards in the United States, and complete the analysis of demographics near port and rail facilities that was begun in conjunction with the 2007 Locomotive and Marine Engine Rule. EPA should also undertake an assessment of the contribution from off-site transportation highways/corridors adjacent to those facilities (e.g., from trucks transporting goods from a port to a rail yard or distribution center). This will allow EPA to better understand the goods movement locations where significant environmental justice concerns may exist, even though community residents may not have raised concerns.

8. EPA should direct each Region to develop a plan to prioritize the most significant goods movement facilities of potential concern for emissions impacts within each region. The priority list should be based on emissions estimates from facilities and off-site transportation emissions, relative size of the facility, anticipated growth, proximity to disadvantaged communities, cumulative impacts, community concerns, and other relevant factors. Additionally, these priority lists should utilize information that already is available, such as emissions inventories, HRAs, action plans that have been developed to reduce emissions, air monitoring results, and scientific research results.

9. For those priority facilities (outlined in 8 see section "Environmental Performance, Planning"), EPA should provide funding and technical guidance to state or local air agencies to conduct localized monitoring for toxic air pollutants in close proximity to the top priority goods movement hubs and corridors, with results available to the public.

10. EPA should conduct and/or fund additional research studies, including:
    - Studies of exposure assessment, emission characteristics of both on-site and off-site sources, and source apportionment studies of emissions from goods movement facilities, including research on coarse, fine and ultrafine particles
    - Toxicologic studies (e.g., animal and biomarker studies and assays);
    - Epidemiologic studies of health effects of residents or school children in communities impacted by goods movement.
    - Cumulative impacts studies. As guidance in facilitating research and studies, EPA should review the list of research gaps in the HEI Report on the health effects of traffic-related air pollution. EPA should consider developing a three-way funding partnership with NIH (NIEHS) and DOT (FHWA, FRA, and FAA) to fund research on exposure assessment, toxicologic, and epidemiologic studies related to exposure to emissions from the goods movement industry. The partnerships should include community-driven research and participation, including outreach and education.

11. EPA should revisit its health assessment of diesel exhaust emissions [1] as the Agency indicated it would do when it issued its assessment document in May 2002. Considering research that has occurred in the interim, and evaluating the need for further research, EPA should conduct a review of the current status

of diesel risk characterization and the current scientific studies on diesel exhaust exposure and its links to cancer in order to determine if the Agency should reconsider adopting a unit risk value for diesel exhaust. In its scientific review, EPA should consider other health outcomes from exposure to diesel emissions, such as cardiovascular and respiratory illnesses.

12. EPA should consider advocating that health impact assessments (HIA) or similar analytical assessments be conducted for major new or expanding goods movement facilities and transportation projects/corridors that are covered under NEPA. Some EPA regional offices are already requesting that ports and freeway expansion projects conduct such HIAs, which are comprehensive health analyses of proposed infrastructure projects that evaluate air pollution, noise, impacts on access to parks, and other broad health related issues.

13. EPA should develop a national communications plan to reach elected officials, urban planners, transportation officials and community members with information about the emissions from, and health impacts of, goods movement activities, using the same techniques the Agency has used in its SmartGrowth activities. Such a campaign should include fact sheets on each goods movement sector, in a number of languages, that summarizes concerns about emissions and health effects research findings. The information should be readily accessible on the EPA national and regional websites.

14. EPA should develop a special funding stream for environmental justice community grants focused on goods movement communities, to include community-based participatory research related to health impacts.

Regulatory and Enforcement Mechanisms
(Section 4 Recommendations 15 - 21)

15. EPA should ensure effective, early control requirements on international ships and aircraft. On the marine side, EPA should work with neighboring countries to achieve IMO approval of a North American Emission Control Area (ECA) to accelerate deployment of new IMO standards for cleaner ships and fuels. EPA should work with FAA to introduce stringent proposals to the International Civil Aviation Organization for aircraft engines with lower NO_x and PM emissions, as well as cleaner jet fuels. Concurrently, EPA should publicly evaluate the potential benefits, costs, and impacts of pursuing new national regulations requiring advanced control technology and cleaner fuels for both U.S. and foreign-flagged ships operating in U.S. waters, and aircraft serving U.S. airports.

16. Significantly accelerate modernization of the existing diesel fleet used to transport freight. EPA should fully use its programmatic authorities to achieve additional, earlier reductions from existing goods movement sources. EPA should also encourage its federal partners to support these efforts through incentives and other mechanisms. EPA's actions should include, but not be limited to:
    - Requiring or updating engine rebuild standards for all existing engines under its authority;
    - Using all available means to encourage engine and equipment manufacturers to accelerate the development and production of the cleanest engines in advance of regulatory deadlines sources; and
    - Evaluating and assessing operational opportunities to reduce in-use emissions, such as adopting a national, time-limited idling standard for all engines under its jurisdiction. (See Financing section for complementary incentives element)

17. EPA should facilitate state and local initiatives that go beyond federal requirements to cut community and regional pollution. EPA's role should include:
    - Providing technical assistance to states that want to adopt and enforce in-use emission standards to accelerate fleet modernization, as allowed by federal and state law
    - Issuing timely waivers for stricter California vehicle and fuel emission standards to benefit all states wishing to "opt-in" to those standards

- Supporting expansion of state/local operational restrictions, including but not limited to, idling limits and designated truck routes, with information about successful programs that could serve as models
- Using federal leverage (via project approval authority and funding capability) to aid state/local efforts on legal agreements with industry to accelerate progress (early availability of cleaner engines depends on recommendation 16 above.)

18. Establish quantitative goals to reduce emissions and exposure from existing, major freight facilities and plans to achieve those goals. EPA, in consultation with states and communities, should identify sites of concern and establish priorities among them. EPA should employ available planning mechanisms to set such goals, either by identifying national targets or assisting local or state efforts. EPA and other federal agencies should encourage ports, marine terminal operators, railroads, airports, and transportation agencies, etc., to develop freight facility air quality plans in a public process with: quantitative reduction goals, commitments for action to achieve those goals based on voluntary initiatives with public agency involvement, enforceable agreements, the facility's legal authorities, and/or incentives; and periodic public reporting on progress. With this mechanism, EPA and partner agencies can offer assurances to environmental justice communities regarding the magnitude and pace of emission reductions from high priority freight facilities. In nonattainment areas, EPA should back these goals with enforceable SIP commitments for future federal actions to reduce emissions from goods movement sources for timely attainment.

19. Mitigate localized air impacts from expanding existing freight facilities or siting new ones. If full mitigation is not feasible, EPA should establish policies and guidance to assure that new and expanded infrastructure and/or facility projects will achieve the highest technically feasible air levels and be mitigated to the extent acceptable to impacted neighborhoods. As part of the guidance, EPA should outline a process based on the principles and recommendations in Section 3.1 (Effective Community Engagement) of this report. To accomplish this, EPA should work with DOT agencies to require more effective general and transportation conformity programs to ensure that affected projects cannot simply use the expected reductions from other sectors to subsidize growth in operations. In communities already impacted by high pollution levels from freight facilities, expansion and new facilities should not be considered unless the project and its mitigation measures can be designed to at least "do no harm" to the localized area, as well as the region.

20. Expand enforcement. EPA should increase its enforcement efforts, in coordination with state/local authorities, by deploying more field inspection teams to focus on sources operating at goods movement facilities and within nearby communities. EPA should also target violation penalties to help fund fleet modernization by directing enforcement fines toward diesel clean up projects in environmental justice areas.

21. EPA should vigorously implement and enforce on-time implementation of all current mobile fleet clean fuel and emission reduction regulations.

Land Use Planning and Environmental Review
(Section 5 Recommendations 22-27)

22. EPA should ensure that its staff is familiar with, conversant about, and engaged on local and regional goods movement issues. Specific steps should include conducting site visits of selected goods movement environmental justice communities to view land uses where significant emissions sources are located near sensitive receptors, so that EPA is as familiar with the goods movement issue as it is with TRI emitters and Superfund sites. By meeting with community leaders and residents, as well as with state and local air pollution regulators, goods movement industry representatives and authorities (port, rail and trucking industry, and distribution center developers), and scientific experts on the health impacts of

air pollution, EPA will have a solid basis for moving forward on several fronts. Also, EPA will have established a basis that includes guidance for addressing the relationship between land use and air quality to protect public health and inform future land use with consideration of cumulative impacts.

23. EPA should develop national guidance for addressing land use decisions and air quality with regard to separating sensitive receptors from mobile source air pollution generated by goods movement facilities, including highways, ports, rail yards, and distribution/transload centers. For this guidance, EPA could use as background the work done by the HEI reviewing research findings and guidance on suggested buffers developed by the California Air Resources Board (CARB), while recognizing that each goods movement facility has different operational dynamics, and the location and population density of nearby residents can vary widely. EPA already has a document on land use activities and air quality, but it does not mention goods movement nor the scientific studies about health effects in close proximity to traffic-related pollution, so it needs updating. As a reference, CARB has recommended not siting "new sensitive land uses such as homes, schools, daycare centers, playgrounds or medical facilities near goods movement facilities." Its recommendations included avoiding the "siting of sensitive land uses within 500 feet of a freeway; 1000 feet of a distribution center or a service/maintenance rail yard; and immediately downwind of ports in the most heavily impacted areas." In addition, for "facilities within one mile of a rail yard," CARB recommended that consideration be given to "possible siting limitations and mitigation approaches." This guidance should include some consideration of site-specific factors and be widely disseminated to the transportation and logistics industry, planning officials, school administrators and boards, real estate developers and others.

24. EPA should develop and publicize a "best practices" clearinghouse, describing successful methods of reducing diesel emissions in each goods movement sector as well as successful methods of engaging communities in that process, including copies of NEPA letters that EPA has developed on goods movement issues. With such information readily accessible, community residents, industry, port and transportation officials will not have to "start from scratch" in researching successful mitigation measures and alternative technologies that they might want to consider when considering land uses.

25. EPA should make publicly available staff comments on NEPA environmental reviews for port, rail or highway facilities and part of the Goods Movement Clearinghouse as referenced in recommendation 24. EPA should post such comments on each Region's website, with a link to these comments from the Region's EJ page. In this regard, EPA should also consider whether a review or possible update of EPA's 11-year old *Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* is needed to address concerns about environmental justice from mobile source air pollution at goods movement facilities.

26. EPA should continue to work with the DOT to update its FHWA guidance to state DOT agencies about methods for quantitatively analyzing mobile source air toxics (MSAT) for new/expanding transportation infrastructure projects, as well as with other DOT agencies (FRA, FAA) for similar guidance on new/expanding rail facilities and airports), including the need to consider the body of data showing health effects in close proximity to traffic-related pollution. This strategy should include developing educational materials on other health-related topics to help the public understand how transportation and land use decisions relate to near roadway health impacts, quality of life issues, and physical activity limitations. Providing this information will make the public better equipped to provide meaningful input during the public participation process.

27. EPA should conduct an analysis of its legal authorities to influence land use decisions on the siting of new or expanded goods movement activities and facilities, including highways.

Technology
(Section 6 Recommendations 28-30)

28. EPA should expand the amount of credit allowed in SIPs that drive states to offer economic and other incentives to reduce existing equipment emissions through accelerated deployment of cleaner technologies. Such programs must include enforceable provisions that provide certainty to impacted communities that those emissions benefits will be achieved. This guidance should encourage the development of programs which offer sufficient incentives that encourage equipment owners to pick up a substantial portion of costs in order to extend the life of an existing piece of equipment with lower emitting technologies. This guidance also should encourage the adoption of technologies and methodologies expediting vehicle, container, and other product movement through goods movement facilities.

29. EPA should establish, within a national clearinghouse, information about goods movement emissions reduction technologies, techniques, and best practices. EPA's guidance development for best practice mitigations should be incorporated into all new goods movement facility and corridor projects. These practices should help land use planners, infrastructure developers, and others identify the cleanest available technologies appropriate to the specific nature of a given goods movement development. EPA should make such a clearinghouse available to affected communities to inform and empower local communities to address projects under review for mitigation.

30. EPA should use its own research and development resources, as well as partner with other federal partners and other stakeholders, to develop and accelerate the commercialization of innovative technologies that will benefit communities impacted by goods movement activities.

Environmental Performance, Planning and Management
(Section 7 Recommendations 31-34)

31. EPA should, through its SmartWay and other programs, encourage shippers, trucking firms, and railroad companies to use corporate modeling and management tools like the FLEET model and EMSs to measure their environmental footprints. EPA should continue to develop additional tools and models and encourage the use of EMSs for other segments of the goods movement system, including ocean-going carriers, air carriers, major developers of distribution centers, state transportation departments, and municipal planning organizations. EPA's involvement in training can help encourage both the development of EMS for general environmental improvement as well as specific guidance on including environmental justice concerns in the EMS planning process. Through the trainings, EPA should encourage public participation in public entity EMS planning (both initially and as part of the periodic review process where results are publicly reported and the plan modified as needed) and encourage integration of relevant portions of private sector EMS or other tools where the private sector entities are willing to do so.

32. EPA should provide technical assistance funding to review environmental management practices of organizations involved in goods movement in geographic areas with environmental justice concerns. Coordinated reviews could help identify potential synergies or conflicts between various management approaches, which could serve as part of the "check" process of continuous environmental improvement.

33. EPA should develop and provide educational material, programs, and funding to organizations which could help develop a more comprehensive approach to emission reductions due to their areas of authority. In particular, municipal and regional planning organizations and transportation departments have relevant responsibilities but may lack training and awareness of environmental justice impacts of

goods movement facilities. This effort should include both information targeted at senior management and elected officials as well as expansion of the technical guidance that EPA has developed relevant to assessment and reduction of environmental justice impacts of certain goods movement industry sectors so that it is relevant to more goods movement industries and participants.

34. EPA should encourage the funding of pilot projects, which utilize a holistic approach and the reduction of environmental justice impacts from goods movement in specific geographic areas. EPA's involvement in this effort should also encourage public participation in EMS planning (both initially and as part of the periodic review process where results are publicly reported and the plan modified as needed). EPA should allow funding of these kinds of holistic environmental justice impact reduction plans for goods movement as Supplemental Environmental Projects for settlement of enforcement actions. Where EPA funding is not available, EPA should encourage other federal, state, and local governments as well as private entities to fund such projects.

Resources, Incentives and Financing
(Section 8 Recommendations 35-41)

35. EPA, in partnership with other federal agencies, should propose increased funding for programs that encourage the accelerated development and deployment of lower emitting technologies and effective mitigation strategies into the goods movement sector. EPA should prioritize use of National Clean Diesel Campaign funding to improve the air quality within goods movement impacted communities by promoting the deployment of cleaner technology using certified and verified technologies. EPA should provide factual information about the national cost to modernize the entire goods movement fleet, the health and economic benefits of accelerating that modernization, and the possible mechanisms to help incentivize that effort.

36. EPA should seek full funding for the *Diesel Emission Reduction Act* of 2005 at the full authorized level, with monies directed to areas with high health impacts from goods movement activities. EPA, in its prioritization of grant awards, should ensure that these funds and the allocation formula used for these funds is based on reducing risk in environmental justice communities impacted by goods movement activities. EPA should work with Congress, DOT, and other federal agencies related to goods movement activities, to ensure that any new fees considered for cargo or freight infrastructure include funding to reduce emissions and health risk.

37. EPA should seek joint innovative financing strategies with other federal agencies, non-profit organizations, and private industries. These financing strategies should encourage public-private partnerships that provide flexible financing options as well as informational outreach and technical assistance. Key stakeholders to include in such partnerships are: other federal agencies; state and local governments/agencies; business and finance partners, including non-profit lenders; and community environmental justice and other organizations.

38. EPA should seek to create incentives for facilities and participants in potential public-private partnerships. Incentives should be both financial and compliance-based and include community involvement in determining where funds are to be used for mitigation in these communities. Banks should be encouraged to provide loans that target and alleviate the negative impact of goods movement. Banks should receive Community Reinvestment Act credit for the transactions.

39. EPA, in partnership with other federal agencies, should encourage the funding of projects to clean up the legacy diesel fleet and mitigate impacts on communities. Such incentives include but are not limited to:

- Publicize emissions mitigation from goods movement as a qualifying Supplemental Environmental Project (SEP) if proposed by regulated sources to settle environmental violations near environmental justice communities;
- Leverage DOT Congestion Mitigation and Air Quality funding for cost-effective air quality projects that directly reduce emissions from diesel vehicles and equipment, and push for set asides from other federal funding for infrastructure;

40. EPA, having already endorsed the recommendations of the Environmental Financial Advisory Board (EFAB) report to establish State Air Quality Finance Authorities that would assist owners of small fleets of diesels and of small goods movement related businesses to receive low cost financing, should work with States and Congress to implement these recommendations.
    - EPA and DOT should agree to set aside a significant portion of DOTs allocation of Private Activity Bond authority for projects related to goods movement emissions mitigation.

41. EPA should support access to financing programs (such as loans or loan guarantees) for entities that may have to comply with future federal or state emissions regulations.

Appendix B
2010-2012 Ports Air Quality Plan

Appendix B: Port Air Quality Plan 2010-2012						
Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
Theme: Taking Action on Climate Change and Improving Air Quality: Marine Port and Freight Focus on Diesel Emissions Reduction Grants, Innovative Funding and New Technologies Actions						
1. Utilize existing EPA programs, such as the Regional Diesel Collaboratives and Diesel Emissions Reduction Program grants, to promote emission reductions from marine ports and in the supply chain.	OTAQ, R1, R2, R3, R4, R5, R6, R7, R9, R10	For port and freight-related DERA National Clean Diesel Funding Assistance grants: Administer and close out FY2008 grants; administer and close out ARRA grants; award, administer and close out 2009 - 2010 grant awards; administer competitions, award and administer 2011 grant awards.	For port and freight-related DERA grants: FY08 and ARRA grants underway typically with 2 year project period; FY09/10 RFP closed Dec 8, 2009, and evaluations expected by Feb 2010; Awards expected by April 2010; ongoing project monitoring and oversight including quarterly and final reports from grant recipients.	Start: Dec 2009 End: Dec 2012	Number of grants and cooperative agreements, number of engines affected, gallons fuel saved, emissions tons reduced based on quarterly grant reports and/or DEQ estimates; Reports to Congress.	Assumes FY2010 levels of funding continue for DERA grants and that supply-chain related sources will continue to compete successfully for funding.
1	OTAQ, R1, R2, R3, R4, R5, R6, R9, R10	Foster creation of clean diesel marine and freight projects through EPA's State and National Clean Diesel funding programs.	Include ports sector as priority in the 2009/2010 Request for Proposals, regional priorities section.	Oct 2009: National RFP issued and includes ports (marine engines, dray trucks, urban areas) as regional priority. Dec 2010: State work plans submitted. Consider for FY11 funding cycle.	Port and marine priorities listed in RFP; Number of quality proposals received from port authorities, states and other eligible entities to reduce emissions from marine vessels and other equipment operating at or near ports.	Assumes FY2010 levels of funding continue for DERA grants and that supply-chain related sources will continue to compete successfully for funding.

Appendix B: Port Air Quality Plan 2010-2012						
Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
2. Work with port authorities and fleets to educate them and to achieve emissions reductions.	OTAQ, R1, R2, R3, R4, R5, R6, R7, R9, R10	Educate stakeholders on clean diesel activities to enable diesel emissions reductions and grant applications; foster partnerships between eligible applicants and fleets; develop port- and marine-specific communication materials; hold port- and goods movement-related working groups and conference calls	Update Clean Ports USA brochure, case studies and web site, Update SmartWay web site, sector workgroup calls and meetings for NEDC, SEDC, MCDI, and WCC	Brochure and Web site: Start: Jan 2010, End: Aug 2010, Other calls and meetings ongoing.	Calls completed, number of presentations, communication materials used, hits on web sites, number of projects and amounts applied for and awarded.	Assumes FY2010 levels of travel resources for outreach efforts.
2	OTAQ	Clean Ports USA to participate in AAPA's Harbors Navigation and Environment committee meetings to promote EPA programs and air emissions reductions in the transportation supply chain.	Provide updates to working groups and participate in Air Quality working group, attend/speak at AAPA seminar, May 2010 in Savannah, GA, and 2011 TBD.	May 2010, bi-annual meetings	Attend meeting, provide presentation, continue to foster partnerships.	Assumes FY2010 travel resources for outreach efforts continue
2	OTAQ, R1, R2, R3, R4	Consider options to bring the Faster Freight Cleaner Air Conference series or similar freight conferences to the East Coast by end of 2012. Conference focuses on solutions and resources to improve operations and reduce emissions from the goods movement industry. Finding and implementing solutions to the many externalities of our nation's goods movement systems are tasks of paramount importance, as is ensuring that our ports operate effectively and safely.	Develop options, agenda, solicit speakers, promote conference, attend conference.	Ongoing discussion of conference in Baltimore, date TBD.	FFCA is an important venue for industry, community, labor and government agencies to discuss common ground and learn more about the technologies, programs and policies that facilitate the efficient movement of cargo while reducing the environmental impacts of this crucial economic activity.	Assumes contract and travel resources

Appendix B: Port Air Quality Plan 2010-2012						
Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
2	R2, R3	Promoting anti-idling from trucks and locomotives. Promoting truck-stop electrification, especially along the PA turnpike, I-81 and I-95 corridors.	Quarterly reports.	Ongoing	EPA grants for truck-stop electrification and other outreach work.	
2	R3	Coordinating with Regional Planning organizations (e.g., Delaware Valley Regional Planning Commission) and interstate transportation planning groups to connect SmartWay and other EPA port-trucking-rail intermodal resources in with regional groups.	Quarterly meetings/calls.	Ongoing	Number of SmartWay partners and use of EPA tools.	
2	R4	Visit 5 key ports in Region 4 and discuss clean air strategies.	Port visits.	Start: Feb 2010 End: Dec 2011	Number of ports visited.	Assumes travel resources for meetings.
2	R5	Encourage states, municipalities, and nonprofit partners to involve Great Lakes port drayage and carrier operations as a part of air quality planning. Additionally, encourage our partners to include drayage equipment and carriers who service Great Lakes ports in their clean diesel projects.	1) Organize or locate meetings where SmartWay Transport Partnership can be promoted to port tenants and operators 2) Explain how SmartWay can reduce fuel use and emissions 3) Follow-up with interested operators, hand-off to OTAQ for partnership.	Ongoing	MCDI will present marine supply chain issues (when applicable) concurrently with the SmartWay Transport Partnership.	

Appendix B: Port Air Quality Plan 2010-2012

Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
2	OTAQ, OIA, R9, R10	Develop a substantive Pacific Rim Ports Partnership with Taiwanese ports. Environmental Protection Cooperation Agreement 2010 Implementation Activities for ports air quality will be agreed upon in 1st quarter 2010.	Present EPA programs and CA ports case studies; Training; Solicit speakers, promote and attend conferences.	OIA-R9-Taiwan EPA information sharing meetings held Nov 9-10, 2009. 1st quarter 2010; plans with Clean Air Asia meetings in Aug 2010.	International ports informational sharing.	Assumes travel resources.
2	R10, R9	Coordinate with WCC partners to implement a Goods Movement Sector Workgroup combining the current Ports/Marine, Trucking, and Rail Sector Workgroups.	First goods movement conference call planned for may 2010 and continued periodically.	Goods movement conference call planned for spring 2010.	Goods movement conference calls and meetings.	
3. Expand verified and certified engine, vehicle, and equipment configurations available to reduce air emissions from port- and marine-related sources.	OTAQ	Encourage manufacturers to develop, verify, test and deploy technologies to achieve significant reductions of harmful diesel emissions in the transportation supply chain.	Hold bi-annual meetings with MECA, participate in conferences to promote verified technologies.	On-going	Number of technologies listed on EPA's Verified Technology List and SmartWay Idle Reduction List for marine port and supply chain related sources.	
4. Expand Emerging Technologies available to reduce air emissions from port- and marine-related sources.	OTAQ	Encourage manufacturers to develop, verify, test and deploy emerging technologies to achieve significant reductions for harmful diesel emissions in the transportation supply chain.	Hold bi-annual meetings with MECA, participate in conferences to promote verified technologies.	On-going	Number of technologies listed on EPA's Emerging Technology List for ports and marine-related sources.	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
4	OTAQ, OIA, R2	Develop series hydraulic hybrid cargo handling yard hostler at Port of New York and New Jersey to reduce air emissions and improve fuel economy	Develop technology, Conduct performance, emissions and fuel economy testing, put into commercial service for test period	Start: 2007 End: Dec 2010	Tons PM and NOx reduced, fuel saved, other performance measures.	
4	OTAQ, R9	With OTAQ support, Region 9 leads the 2009/2010 CA Clean Air Technology Initiative/Forum to advance technologies. The technology initiative consists of a total of 12 teams, including 3 permanent teams. The Research Coordination Council (RCC) members are senior managers of the respective organizations. The Liaisons directly report to the RCC members and represent them in most decisions made by the Initiative. The Work Group consists of technical staff in the partner organizations and they carry out most of the work of the initiative. Relevant Technology Focus Teams: Locomotive Controls; Fuel Cell Applications; Off-Road Vehicles and Equipment; Electric Vehicles. The South Coast and San Joaquin Districts agreed to develop work plans to reduce criteria, greenhouse gas, and toxic emissions from major source categories using advanced and emerging technologies. The work plans will focus on the San Pedro Bay Ports and the Wilmington area and the Southern San Joaquin Valley.	Liaison meetings and plans.	Liaison meeting (55 attendees) Dec 1 - 2, 2009. Clean Technology Initiative: Region 9 hosted a meeting at UC Irvine with representatives from EPA Headquarters (OTAQ, OAQPS, OPAR and ORD), the California Air Resources Board, California Energy Commission, South Coast Air Quality Management District, and San Joaquin Air Pollution Control District. We will meet again early 2010 to further develop plans.	Number of emerging technologies featured.	Assumes FY2010 resources but the more funds available the more technologies can be developed.

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
5. Start at least three Clean Diesel Emerging Technology Grant projects each year between 2010 and 2012, demonstrating emission reduction technologies of strategically high value on equipment used at ports or to carry freight to and from ports, including maritime shipping, and intermodal transport modes.	OTAQ	For port and freight-related DERA Clean Diesel Emerging Technology grants: administer and close out FY2008 grants; administer and closeout ARRA grants; award, administer and close out 2009 - 2010 grant awards; administer competitions, award and administer 2011 grant awards.	For port and freight-related DERA grants: FY08 and ARRA grants underway typically with 2 year project period, FY09/10 RFP closed Dec 8, 2009, and evaluations expected by Feb 2010; Awards expected by April 2010; ongoing project monitoring and oversight including quarterly and final reports from grant recipients.	Start: Dec 2009 End: Dec 2012	Number of grants and cooperative agreements, number of engines affected, gallons fuel saved, emissions tons reduced based on quarterly grant reports and/or DEQ estimates; Reports to Congress.	Assumes FY2010 levels continue for DERA grants and that marine port and supply-chain related sources will continue to compete successfully for funding.
5	OTAQ, R1, R2, R3, R4, R5, R6, R9 R10	Promote availability of DERA Clean Diesel Emerging Technology program opportunities to port and freight stakeholders	Regional collaborative communication mechanisms (workgroup calls, partner meetings, emails, web sites, press releases)	Ongoing	Press events, number of calls, meetings, NCDC Helpline calls, and outreach materials	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
5	R3	Support Pittsburgh Towboat Repower DERA ARRA 2009 grant	DERA Emerging technology grant will fund re-power a Pittsburgh based towboat, Champion Coal, operated by CONSOL Energy in the Pittsburgh area, which includes Allegheny County, in order to field test an engine upgrade kit developed by Caterpillar that was developed to satisfy the EPA's Tier 2 emission standards for class 2 marine engines.	Start: FY09 End: December 2012	Press events and outreach	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
5	R9	R9 conducts regular outreach to port-related engine manufacturers to encourage their technology be advanced by applying for DERA emerging technologies funding. Region 9 Air staff is on the CAAP Technology Advancement Program Advisory Committee which advances new technologies to meet the control measures in the CAAP. An example of the proposals the TAP reviewed are: EcoEnergy Solutions (Emulsified Biodiesel); Electric Yard Hostler; ENRJ International Group (OGV Boiler Emission Control); BP/Krystallon (Sea Water Scrubber); ROTEC (Low Emission Diesel Engine Retrofit); AutoCar (LNG Drayage Truck); terminal Eco-Cranes; Johnson Matthey SCRT Demo; Crowley Marine LNG Tug; Ultra Regen Power System for RTG Cranes; RefExhTM Diesel Particulate Control Technology; Space Efficient Hybrid Collector; AMECS (OGV hood); APL Singapore water emulsification and slide valves; Foss Hybrid Tug Boat; and Pacific Harbor Lines DPF.	TAP meetings and TAP proposal review.	Start: 2009 End: Dec 2012	Participation in calls and conferences.	
5	R9, R10	Support PSCAA agency in two existing emerging technology projects: the DERA 2008 Emission Upgrade to the Fishing Vessel Fierce Allegiance and the DERA ARRA 2009 Foss Marine Retrofit Project.	Press Event for Washington ARRA projects.	Start: Dec 2009 End: Dec 2011	Completed Press Event.	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
6. Establish SmartWay Finance and other innovative financing programs (e.g., state low-interest loan funds, SBA programs) to provide funding incentives or access to funds to facilitate vehicle/engine upgrade or replacement ahead of compliance dates.	OTAQ	For port and freight-related DERA SmartWay Financing grants: administer and close out FY2008 grants; administer and close out ARRA grants; award, administer and close out 2009 - 2010 grant awards; administer competitions, award and administer 2011 grant awards.	For port and freight-related DERA grants: FY08 and ARRA grants underway typically with 2 year project period, FY09/10 RFP closed December 8, 2009 and awards expected by April 2010; ongoing project monitoring and oversight including quarterly and final reports from grant recipients.	Start: Dec 2009 End: Dec 2011	Number of grants and cooperative agreements, number of loans made, number of engines affected, gallons fuel saved, emissions tons reduced based on quarterly grant reports and/or DEQ estimates; Reports to Congress.	Assumes FY2010 levels continue for DERA grants and that marine port and supply-chain related sources will continue to compete successfully for funding.
6	OTAQ, R1, R2, R3, R4, R5, R6, R9, R10	Promote awareness of SmartWay Finance program opportunities to port and freight stakeholders.	Regional collaborative communication mechanisms (workgroup calls, partner meetings, emails, web sites).	Ongoing	Number of calls, meetings, NCDC Helpline calls, and outreach materials.	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
6	R5	Encourage states to create innovative financing programs, and where adopted, allow drayage equipment and other port-related equipment to be eligible for those funds.	1) Encourage states to include marine options as eligible activities for state allocation money 2) If innovative financing becomes available in the region, communicate the opportunity to the marine sector.	Ongoing	MCDI will promote inclusion of innovative financing options for drayage and other port related equipment.	
6	R10	Support Cascade Sierra Solutions in implementation of Ports Activities in new outreach center at the Port of Seattle and servicing the Port of Tacoma. Support efforts of Cascade Sierra Solutions in implementing its $9 million Revolving Loan Fund Grant.	Press Event for Washington ARRA projects in December 2009, possible additional outreach opportunities	December 2009	Completed Press Event, additional outreach TBD	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
Theme: Taking Action on Climate Change and Improving Air Quality: Goods Movement Actions						
7. Develop a transportation supply chain approach to reducing air pollution from freight movement that recognizes the critical role the ports play in goods movement and allows shippers to choose cleaner methods to move goods for criteria pollutants and GHGs.	OTAQ, R1, R2, R3, R4, R5, R6, R7, R9, R10	Utilize existing EPA programs, such as the SmartWay program, to promote emission reductions in the supply chain.	SmartWay enhances existing program to cover more modes across global supply chain	Ongoing	number of SmartWay partners, fuel saved, emission tons reduced	Assumes FY10 levels of funding
7	OTAQ, R1, R2, R3, R4, R5, R6, R9 R10	Extend the SmartWay Partnership Program to drayage carriers to incentivize the purchase and operation of cleaner drayage trucks	Pilot program in Houston then roll-out nationwide	Jan. 2010: Pilot program completed. Nationwide rollout ongoing.	number of SmartWay partners, emission tons reduced	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
Theme: Taking Action on Climate Change and Improving Air Quality: Measuring Progress - Through Emissions and Cost-effectiveness Calculations						
8. Develop supply chain emissions accounting tools to help shippers & carriers quantify the environmental footprint of goods movement & establish corporate improvement goals for emissions performance.	OTAQ	Utilize existing EPA programs, such as the SmartWay program, to provide tools that assess and track emission reductions in the supply chain.	Roll out new SmartWay emissions accounting assessment and tracking tools. Beta test with new user groups. Develop user guides for each of the new tools. Provide internal and external training for the new tools. Peer review the models.	Complete phase 1 modal tools in 2010, along with all user guidance documents, peer review, web publishing. Stakeholder education and training ongoing.	Phase 1 tools completed. Technical guidance documents for Phase I tools completed. Materials posted on web.	Contract dollars to complete project
8	OTAQ	Develop Diesel Emissions Quantifier (DEQ) sections for marine applications and continue to develop capabilities for other port-related emissions calculations.	Test and launch Marine calculations; update health benefits calculation; update CO2 emission factors for marine and locomotive to reflect better data about engine repowers and replacements; periodic model updates	Start: November 2008, Marine module deployed March 2009, marine engine defaults updated February 2010; health benefits calculation compiled: September 2009; model maintenance ongoing through December 2012	Model complete and posted on website; upgrades on-going; web interface improvements April 2010.	Assumes contract funds for CO2 Emission Factor update.

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
8	OTAQ, R1	Develop and deploy SmartWay Drayage Truck calculator.	Calculator developed, pilot test with stakeholders	Calculator deployed First quarter 2010	Partner announcement, acceptance of calculator by drayage truck firms, terminal operators and port authorities.	Assumes contract funds for CO2 Emission Factor update.
8	OTAQ	Support partners using modeling tools via NCDC Helpline.	Calls/emails usually answered within 1 business day, Monthly reports of stakeholders assisted	Ongoing	Numbers of stakeholders assisted with DEQ and other modeling tools.	
8	OTAQ, R1, R2, R3, R4, R5, R6, R9, R10	Promote tools and participate in webinars to train stakeholders about modeling developments.	Communication materials via email and websites posted; training webinars held; on-going assistance via NCDC and SmartWay Helplines.	Ongoing	Number of stakeholders who participate in webinar or web hits on posted webinar, number of contacts assisted via NCDC or SmartWay Helplines on EPA tools.	
8	R1, R2, R3, R9, and R10	When the new SmartWay carbon accounting and tracking tools are complete, the NEDC and WCC will roll out to its partnership via pertinent sector workgroups and face-to-face meetings.	Discuss SmartWay new carbon emissions tools status at May 2010 WCC Partners Meeting; Discuss at 2010 NEDC Ports Workgroup call	May 2010	Partners meeting.	

Appendix B: Port Air Quality Plan 2010-2012						
Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
Theme: Taking Action on Climate Change and Improving Air Quality: General Collaborations and Communication						
9. Support port agencies, state and local governments, and fleets in the development of their additional specific air emissions reductions goals	OTAQ, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	Support state and local agencies in their work to reduce diesel emissions from port sources.	For states that choose to use State Clean Diesel grants for this purpose, award and monitor grants.	Ongoing	Quarterly reports; conference calls.	Assumes FY2010 levels continue for DERA grants
9	OTAQ, R1, R2, R3, R9, R10	Provide technical support to ports implementing sustainable port strategies.	Conduct quarterly check in calls with ports on progress, participate on workgroups to develop emissions inventories or clean air strategies, Promote NW Port Strategy Targets and San Pedro Bay Clean Air Action Plan through WCC activities and Partnership meeting May 2010. Support ports via partnerships with SmartWay stakeholders (3PLs, shippers, carriers, OGV companies, railways, drayage fleets, etc) at industry conferences, events and through SmartWay and Clean Ports USA webinars, e-updates, educational and outreach materials and models published on our website, and through our network of SmartWay partner account managers.	Ongoing	Partners meetings, conference calls	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
9	OTAQ, OIA, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	Conduct Regional Leadership Forum to establish dialogue about priorities from EPA executives to senior representatives from port-related industries, state and local agencies and environmental organizations.	Regional Leadership Forum.	Start: Planning Jan 2010, Hold meeting by Dec 2010 Additional RLFs TBD	Regional Leadership Forum complete, plan revised.	Assumes travel resources available.
9	R1	Encourage the use of the cleanest marine engines available through the NEPA process, outer continental shelf permitting and general conformity determinations.	Use of clean marine engine specifications in regulatory documents.	Ongoing	Clean marine engine specifications are included in new construction projects that involve marine engines.	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
9	OTAQ, R1, R2	Encourage the use of the cleanest marine engines available through state and federal Supplemental Environmental Projects related to enforcement actions.	SEPs directed toward clean diesel marine projects.	Ongoing	Marine ferry repowered through Daimler Chrysler SEP. Other SEPS possible.	
9	R4	Incorporate standard language regarding port construction equipment to encourage clean technologies.	Draft and final contract language.	Final Draft: Mar 2010 End: June 2010	Language incorporated into contracts.	
9	R6	Issue Texas Offshore Port System (TOPS) Permit	Public Notice and draft permit.	Public Notice May 2011 Permit Issue May 2012 (assumes revised application received Spring, 2010)	Emissions reductions in tons per year: 29,237 NOx, 4,493 PM, 2,302 CO, 24,349 SO2, 1,035 VOC.	
9	R6	Issue renewal of expired Gulf Gateway Offshore LNG Title V Permit	Public Notice and draft permit.	Public Notice May 2010 Permit Issue Oct 2012	Emissions reductions.	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
9	OIA, OTAQ, R6	Support Gulf of Mexico Fuel Switching Demonstration with Port of Houston Authority	Dec 2009 First fuel switch Feb 2010 second fuel switch.	Start: Dec 2008 End: Aug 2010	Emissions reductions, Mexico uses information to consider ECA designation.	
10. EPA will collaborate with other key federal entities to facilitate the use and exportation of cleaner technology, such as the hydraulic hybrid, through partnerships with domestic and foreign ports and other key stakeholders.	R2	"Walk the walk" at federal port facilities - reduce idling, implement retrofits, gensets, renewable fuels.	Summer 2010 - work with federal facilities to set up idle reduction campaigns. FY 2010 - discuss vehicle replacement for FY 2011 - 2012.	Ongoing	Number of idle reduction campaigns and policies implement, retrofits, upgrades, repowers, replacements completed yearly.	
10	OTAQ, OIA, R10	Continue Pacific Rim Partnership with the Ports of Tacoma and Seattle to share information and develop joint clean shipping/ports projects with the Taiwanese ports of Kaohsiung and Keelung. Hydraulic hybrid technology was highlighted in the US-Taiwan Ports Air Quality Partnership Conference, held in Taiwan Nov 2008.	Consider joint projects as resources allow.	Ongoing		

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
11. Work within EPA, across federal agencies & with stakeholders to support, finalize and implement USG Emission Control Areas proposal to IMO.	OTAQ, R2, R9	Continue to work closely with other federal agencies; Regions perform outreach and informational Congressional briefings.	MEPC-60 meeting.	Start: Jan 2009 End: Dec 2012	Finalize USG Proposal, support negotiations, begin implementation.	
12. Continue – and expand where appropriate – partnerships with federal agencies and other stakeholders to advance transportation planning and promote projects that reduce emissions.	R2	Promote infrastructure improvements to reduce congestion and improve freight movement.	2010 Northern Transportation and Air Quality Summit. FY 2011-2012 CMAQ funds used for locomotive improvements, marine highways, and truck dedicated routes.	Ongoing	CMAQ dollars committed to goods movement projects.	
12	OTAQ, R2, R3, R5, R9, R10	Encourage port operators and tenants that are in nonattainment and maintenance areas to work with DOT to explore CMAQ funding for clean diesel activities.	Promote non-EPA funding options for the marine sector on the MCDI web site and other materials	Ongoing	Number of CMAQ projects	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
13. Participate actively in the DOT/MARAD National Congestion Initiative, Marine Highways, and other relevant efforts.	OTAQ, R1	Make tools and resources from EPA's work with MARAD on the Marine Highways Initiative and vessel/facility design available to New England ports interested in short-sea shipping and redevelopment.	Participate in Clean Ports USA & SmartWay calls. Roll out to ports via NEDC Ports Workgroup and SSS interest network.	Ongoing	New Bedford, Bridgeport, and other ports apply to become part of marine highway network. Proposed facility and network changes are designed to minimize emissions.	
13	R9	The Southern California National Freight Gateway Collaborative agreement was signed by 22 local, state, and federal agencies (Oct 2007); follow-up meetings were held in Jan 2008. R9 is focusing on NEPA review process, EJ, and community impacts of transportation projects in southern CA.	Meetings.	Ongoing	Coordination among federal agencies.	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
Theme: Healthy Communities and Ecosystems: Environmental Justice Actions						
14. Consider the recommendations of the NEJAC Report "Reducing Air Emissions from Goods Movement: Moving Towards Environmental Justice	OAR, R2, R9, R10, OECA, ORD, OPEI	Respond to the mobile source related recommendations of the NEJAC Goods Movement Report (Sept 2009).	Meet with workgroup to get NEJAC feedback on response process Provide interim feedback to NEJAC on recommendations Final response to NEJAC.	Start: 2008 End: 2010 Meetings Jan 2010, May 2010, Summer 2010	Recommendations.	
15. Reach out to EJ Communities to encourage quality diesel grant applications and seek funds designated to community protection from disproportionate impacts from goods movement	OAR, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	Reduce diesel emissions in communities surrounding goods movement centers including ports, continue to highlight opportunities in various assistance programs such as the Diesel Emissions Reduction, CARE grants, and other resources.	Resources are obtained and can be directed to communities in need.	Ongoing	Numbers of quality community grants increase, numbers of engines effected, tons of pollution reduced.	Assumes FY2010 levels of resources continue

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15	R9	R9 convened an EJ roundtable with Administrator Lisa Jackson on Oct 1, 2009, during her California visit to discuss goods movement impacts. Staff (with state and local government counterparts) continue to work with community organizations in Riverside, San Bernardino, Los Angeles, Oakland, and other areas to advise them of funding opportunities and address specific enforcement issues. The EPA-Facilitated I-710 Initiative convenes state and local agencies and community leaders to address EJ problems along that corridor. The next team meeting is scheduled for Dec 8, 2010. EPA also participates in the Inland Valley Task Force, an Interagency collaboration led by CA districts and The Center for Community Action and EJ to address goods movement impacts and other EJ issues in Riverside and San Bernardino.	Draft and final scoping document; meetings.	Document: July 2010	Scoping document for health impacts assessment of communities adjacent to ports and I-710 goods movement corridor.	

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Theme & Goal	Responsible Organization	Objective/ Activity	Milestones	Target Start/Completion Date	Output/Measure	Resources
15	R7	Visit Port of St. Louis and tour surrounding areas to evaluate demographics and environmental justice concerns in surrounding communities.	Site visit	Complete by end of FY10	Site visit	
16. Support cleaner air in vulnerable communities by providing information on sustainable freight goods movement technologies and practices	OTAQ, Regional Collaboartives	SmartWay, NCDC and the regional collaboratives offer information that disadvantaged communities, including EPA's EJ Showcase Communities, can use to promote improved air quality and reduced emissions from freight goods movement in their area, including information about truck and locomotive idle reduction strategies and information on reducing emissions of drayage trucks and other diesel-powered vehicles and equipment.	Additional outreach to shipper distribution centers, ports, and railways and other goods movement hubs adjacent to disadvantaged communities.	Ongoing	Number of partners whose freight distribution centers are located in or near disadvantaged communities.	
Theme: The Global Environment						
17. Continue to work with IMO on efficiency improvements for international shipping operations	OTAQ	Coordinate with other Federal Agencies to exchange information about efficiency improvement programs and participate in MEPC meetings.	MEPC meetings.	Mar 2010	IMO discussion papers.	

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18.Support cleaner, more efficient freight goods movement in Asia	OTAQ	SmartWay coordinates with the World Bank and other countries to exchange information about SmartWay's program elements, verified technologies, and carbon accounting methods.	Project demonstrates green retrofits on older trucks. Local stakeholder networks established. Best practices for local freight goods movement are identified.	Ongoing	SmartWay-like technologies, practices, and emissions accounting methods are transferred to Chinese area to serve as role model within Asia	Travel
19. Support cleaner, more efficient freight goods movement in Europe	OTAQ	SmartWay coordinates with the European Union to launch a SmartWay platform in the EU.	SmartWay demonstrates its new models at conference in EU	Ongoing	SmartWay-like technologies, practices, and emissions accounting methods are transferred to EU to serve as role model within Europe	Travel
20. Support cleaner, more efficient freight goods movement in Latin America	OTAQ	SmartWay coordinates with Latin American agencies and governments to exchange information about SmartWay.	SmartWay gives presentations at workshops and conferences including a Trade Corridor Meeting, a Greening the Border Workshop, and a workshop in Sao Paulo.	Ongoing	Several Latin American countries learn about SmartWay technologies, practices, and emissions accounting methods for potential adoption in Latin America	Travel

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21. Support cleaner, more efficient freight goods movement in Canada	OTAQ	SmartWay coordinates with the federal government of Canada to modify our carbon accounting tools so they can be adapted into French for use in Canada.	SmartWay and the government of Canada draft and sign the appropriate documents to enable the exchange of resources. Begin work on the multi-language module.	Ongoing	SmartWay carbon emissions assessment and tracking tools ARE capable of being adapted for use in Canada, with French language	Contract dollars, in-kind resources, approval for the documents covering this work

Appendix C
Examples of Diesel Emission Reduction Program Grants

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Connecticut Department of Environmental Protection	Retrofit thirteen HDD onroad trucks in state maintenance fleet with DOCs, retrofit four construction vehicles with DPFs, and retrofit seven air compressors with DPFs	1	Hartford	CT	$50,000	2008	Hartford
Northeast States for Coordinated Air Use Management	Install auxiliary power units on 17 locomotives operated by the Providence and Worcester RR - based in Valley Falls, RI; Plainfield and New Haven, CT; and Worcester, MA	1		MA	$535,250	2008	Communities adjacent to rail yards
Massachusetts Port Authority	Install 6 power stations at the Fish Pier, enabling up to 12 additional fishing vessels to connect to shore power when docked, reducing unnecessary idling by 95%	1		MA	$400,000	2008	Fish Pier
Environmental Defense Fund	Replace up to 19 HDDV with fuel efficient hybrid electric medium/heavy duty trucks region-wide	1	New York	NY	$400,000	2008	
Manchester Transit Authority	Retrofit 72 city owned vehicles with DOCs, including highway, water and parks and recreation vehicles; Retrofit 7 transit style school buses with CCVs, install 10 s-bar heaters on school buses, and fuel entire fleet with B20 blend of biodiesel	1	Manchester	NH	$229,703	2008	Manchester
Chelsea Collaborative, Inc	Repower 79 diesel transportation refrigeration units (TRU) with electric versions	1	Chelsea	MA	$1,563,480	2009	Chelsea
Chelsea Collaborative, Inc	Retrofit 4 long haul trucks, nine municipal vehicles, one rubber tire loader. Perform engine upgrades on four rubber tire loaders	1	Chelsea	MA	$357,946	2009	Chelsea

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
City of Providence	Retrofit 40 Class 7 trucks and two Dumpers/tenders with diesel particulate filters (DPF)	1	Providence	RI	$565,100	2009	Providence
Northeast States for Coordinated Air Use Management	Repower one vintage switch locomotive from one engine configuration to a three engine set (nonroad Tier 3 certified genset engines)	1	Boston	MA	$1,050,000	2009	Rail yard communities
New Jersey Department of Environmental Protection	Retrofit 46 pieces of nonroad equipment used for construction projects funded by the New Jersey Environmental Infrastructure Trust and retrofit 26 school buses	2	Multi	NJ	$590,640	2008	Grant targets urban areas in NJ..
New York State Department of Environmental Conservation	Retrofit 429 school buses	2	Multi	NY	$620,172	2008	Buffalo area; Rochester area; Albany area and Syracuse area. All contain significant portions of the city that are potential EJ areas.
Capital District Transportation Authority	Retrofit 195 transit buses that operate in 4 counties with DPFs	2	Albany	NY	$125,000	2008	Albany - citywide; various EJ communities
Port Authority of New York & New Jersey	Offer a low-cost financing program in partnership with ACCION New York, Inc. for either the purchase of heavy-duty trucks retrofitted with EPA or CARB verified emission control technologies, or the repowering of used trucks. Program will cover 90 percent financing	2	Multi	NY/NJ	$750,000	2008	Port communities in Newark (including Ironbound neighborhood), Elizabeth and Jersey City in NJ and North Shore of Staten Island and Red Hook Brooklyn in NY

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Port Authority of New York & New Jersey	Retrofit 30-40 utility trucks operated by the Port Authority with DPFs, including wrecker trucks, dump trucks, and line body enclosed utility trucks	2	New York	NY	$280,500	2008	NYC/Northern NJ metro area - various EJ communities
New Jersey Motor Truck Association	Provide funding to NJ Truckers to retrofit 1994 and newer HDD Delivery Trucks with a combination of APUs, bunk heaters, DOCs, and DPFs	2	Multi	NJ	$548,462	2008	Long-haul trucking sector. Possible impact on EJ communities in NJ.
Northeast States for Coordinated Air Use Management	Retrofit up to 20 pieces of off-road equipment, including but not limited to backhoes, end loaders, excavators, crawler tractors, and cranes with active DPFs	2	Multi	NY,NJ	$400,000	2008	Multistate project - likely to impact EJ at construction sites.
Board of Cooperative Educational Services	Replace two school buses with buses that meet the 2010 standard	2	Ulster County	NY	$130,690	2008	Ulster County – potential EJ communities include Wawarsing, Shawangunk, Plattekill, Esopus
New Jersey Department of Environmental Protection	Retrofit nonroad construction equipment with diesel particulate filters and diesel oxidation catalysts.	2	Multi	NJ	$1,730,000	2009	Likely impacts EJ areas. Grant targets urban areas in NJ. Exact locations of operation not yet determined.
New York State Department of Environmental Conservation	Retrofit school buses with diesel particulate filters.	2	Multi	NY	$1,730,000	2009	Buffalo area; Rochester area; Albany area and Syracuse area. All contain significant portions of the city that are potential EJ areas

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Northeast States for Coordinated Air Use Management	Repower two ferries and three tugboats with Tier 2 engines	2	Multi	NY,NJ,PR	$2,800,000	2009	Project location includes port adjacent community in San Juan, PR; Sunset Park neighborhood in Brooklyn, NY; and Weehawken, NJ; all of which are at least in part EJ communities.
Port Authority of New York and New Jersey	Install shore power at the Brooklyn Cruise Terminal	2	New York	NY	$2,858,200	2009	Red Hook neighborhood, Brooklyn, NY
Port Authority of New York and New Jersey	Replace 636 drayage trucks	2	Multi	NY	$7,000,000	2009	Port communities in Newark (including Ironbound neighborhood), Elizabeth and Jersey City in NJ and North Shore of Staten Island and Red Hook Brooklyn in NY
Cascade Sierra Solutions	Retrofit 789 trailers with aerodynamic technology	2	Multi	NY,NJ	$1,404,327	2009	Long-haul trucking sector. Possible impact on EJ communities in NY and NJ.
CalStart	Replace 51 delivery trucks operating in NYC, southern NJ, and upstate NY with diesel hybrid-electric trucks meeting 2007 standards	2	Multi	NY	$1,275,000	2009	Project takes place primarily in NYC - delivery trucks will travel through various EJ communities throughout the city; Other locations with potential EJ areas include Trenton, NJ, Albany, Syracuse, Buffalo and Rochester, NY.

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Columbia University	Retrofit 78 pieces of construction equipment with diesel particulate filters (DPF)	2	New York	NY	$1,997,279	2009	Harlem neighborhood in New York City
National Association for Pupil Transportation (NAPT)	Reduces local school districts' monthly lease payments for the repowering of 175 or more school buses with compressed natural gas (CNG) engines.	2	Albany	NY	$5,000,000	2009	Albany - citywide; various EJ communities
Allegheny County Health Department	Replace two transit buses with diesel hybrid; retrofit 35 dump trucks; repower one locomotive; upgrade 23 construction vehicles	3	Pittsburgh	PA	$3,498,106	2009	Pittsburgh, Allegheny County
Mid-Atlantic Regional Air Management Association	Retrofit 14 and replace six transit buses; repower 2 harbor craft; retrofit 25 dump trucks; replace six cement trucks; repower one locomotive; replace one truck	3	Towson	MD	$4,320,831	2009	Baltimore
Port of Baltimore (Maryland Environmental Services)	Retrofit two tugboats, seven locomotives, 50 short haul trucks, and 83 units of cargo handling equipment	3	Baltimore	MD	$3,500,000	2009	Baltimore, Curtis Bay, Turner Station
Pennsylvania Department of Environmental Protection	Repower pre-1973 locomotives with a four-axle locomotive powered with an engine approaching Tier 3 emission standards (Mother) and a four-axle platform consisting of four traction motors without an engine (Slug).	3	Pittsburgh	PA	$1,500,000	2009	Pittsburgh, Allegheny County
Virginia Clean Cities (Hampton Roads)	Retrofit with 35 transit buses with diesel particulate filters (DPFs) and/or diesel oxidation catalysts plus closed crankcase ventilation; retrofit one refuse hauler, replace four school buses, and replace of 24 refuse haulers.	3	Virginia Beach	VA	$1,000,000	2009	Hampton Roads, Norfolk, Portsmouth

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Maryland Department of the Environment	Retrofit 76 school buses	3	Baltimore	MD	$1,000,000	2009	Baltimore
Allegheny County Health Department	Repower one towboat used in Pittsburgh, PA and conduct a sea trial, to verify engine system performance. • Pennsylvania Department of Environmental Protection – CONSOL Energy: $1.5 million to repower a tugboat used in Pittsburgh and conduct a sea trial	3	Pittsburgh	PA	$1,532,439	2009	Pittsburgh, Allegheny County
Maryland Department of Transportation (Locomotive)	Repower CSX Switcher locomotive operating in Baltimore.	3	Baltimore	MD	$975,000	2009	Baltimore
Clean Air Council	Retrofit drayage trucks serving Ports of Philadelphia and Wilmington	3	Philadelphia	PA	$350,000	2009	Philadelphia, Wilmington
Railroad Research Foundation WV	Repower CSX Switcher locomotive operating in Charleston, WV	3	Charleston	WV	$975,000	2009	South Charleston
Maryland Department of Transportation	Repower transit buses operating in Baltimore.	3	Baltimore	MD	$505,000	2009	Baltimore
James Madison University/Virginia Clean Cities	Repower construction equipment in Richmond	3	Richmond	VA	$710,000	2009	Richmond
Port of Pittsburgh Commission	Repower Tugs servicing Port of Pittsburgh	3	Pittsburgh	PA	$1,156,838	2009	Pittsburgh, Allegheny County
Virginia Port Authority	Repower dredger operating at Port of Norfolk	3	Norfolk	VA	$775,000	2009	Hampton Roads, Norfolk, Portsmouth
Washington Council of Governments	Repower tour vessel operating on the Potomac	3	Washington	DC	$560,000	2009	DC, Anacostia

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Philadelphia Airport	Terminal shuttle bus replacement at Philadelphia Airport	3	Philadelphia	PA	$475,669	2009	Philadelphia, Chester
GA Ports Authority	Install diesel oxidation catalysts (DOC) and closed crankcase ventilation (CCV) on 47 marine engines	4	Savannah	GA	$164,000	2008	Citizens for EJ, Savannah
Miami Dade City Department of Environmental Resources	Replace five buses with hybrid electrics and replace eight buses with newer engines	4	Miami	FL	$731,850	2008	Center for urban Transportation Research University of S. FL
Georgia Department of Natural Resources	Install a truck stop electrification (TSE) station with 85 spaces for long haul trucks	4	Atlanta	GA	$748,000	2008	Environmental Community Action, Inc.; EJ Resource Center; GA for Transportation Alternatives; Atlanta
Tennessee Department of Transportation	Install truck stop electrification area with 175 spaces	4		TN	$2,000,000	2009	Race Relations Institute of Fisk University, Nashville, Memphis
American Lung Association	Install 200 low rolling resistance (LRR) tires; 55 battery powered air conditioners (AC) and seven engine replacement and repowers	4	multi-state	AL	$1,200,000	2009	Montgomery, Birmingham
East Tennessee Clean Fuels Coalition	Install 200 low rolling resistance (LRR) tires; 55 battery powered air conditioners (AC) and seven engine replacement and repowers	4		TN	$581,849	2009	Nashville
Georgia Ports Authority	Retrofit entire fleet of cargo handling equipment (133 units) at the Savannah port with DOCs and CCVs	4	Savannah	GA	$250,000	2008	Citizens for EJ
Kentucky Clean Fuels Coalition	Replace Perkins diesel engines with CARB certified gasoline engines; scrap old 92 engines, retrofit 3 terminal gates	4	statewide	KY	$473,939	2008	Frankfort, Louisville

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South Carolina State Ports Authority	Engine repower, ULSD, idle reduction technology for about 50 trucks and 40 cranes	4	Charleston	SC	$735,001	2008	SC Environmental Watch, Charleston
Georgia Ports Authority	17 rubber tired gantry cranes-electrification	4	Savannah	GA	$2,720,310	2010	Citizens for EJ, Savannah
Miami Port Authority	4 crane electrification & 17 cargo handling equipment retrofits	4	Miami	FL	$1,507,157	2010	Center for urban Transportation Research University of S. Florida, Miami
Mississippi State University	101 long haul trucks with APUs	4		MS	$1,083,595	2010	
Great Lakes Commission	Repower four marine engines from Tier 0 to Tier 2; repowering service generator sets on two Great Lakes bulk carriers	5	Ann Arbor	MI	$1,209,049	2009	Great Lakes port communities
Indiana Department of Environmental Management	Install emerging reduction systems retrofit technologies on utility and state on-road construction equipment. Indiana Department of Environmental Management: $1 million to retrofit approximately 30 vehicles	5	Indianapolis	IN	$1,000,000	2009	Indianapolis
Port of Houston Authority	Replacements of 62 cargo handling equipment, 68 certified repowers, and 22 yard tractor retrofits	6	Houston	TX	$2,856,666	2009	The Manchester neighborhood adjacent to the Houston Ship Channel & the Houston-Galveston-Brazoria (HGB) 8-county ozone nonattainment area

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Louisiana Department of Environmental Quality	New Orleans-Install idle switches on 7 line end locomotives, City of Bossier City-repower 9 heavy duty trucks with natural gas engines, Caddo Parish-retrofit 7 heavy duty trucks with particulate filters & diesel engine upgrade kits, City of Baton Rouge-repower 4 heavy duty trucks with natural gas engines, Caddo Parish Public School-retrofit 111 school buses with diesel multi-stage partial flow filers (DMF) or equivalent.	6	New Orleans & Baton Rouge	LA	$1,730,000	2009	Bossier City, Caddo Parish, Baton Rouge, & Caddo Parish Public Schools
City of Houston	Replace 34 aging diesel-fueled vehicles & pieces of equipment with new diesel technologies	6	Houston	TX	$2,365,710	2009	City of Houston
Louisiana Department of Environmental Quality	08'-Repower 2 Louisiana Department of Transportation & Development Ferries; 09'-Repower the Marine Vessel Acadia & St. Francisvile Ferries; 10'-Repower Mississippi River Ferries	6	Baton Rouge	LA	$295,320; $352,941; $235,294	2008 2009 2010	5 Parishes in the Baton Rouge area; East & West Baton Rouge, Iberville, Livingston, & Ascension Parishes
Houston Advanced Research Center	Retrofit 51 Class 8A Long Haul Vehicles with APU units	6	Houston	TX	$496,627	2010	Greater Houston area, Texas, and Texas Gulf Coast
Port of Houston Authority	Fuel switching to a lower sulfur fuel on 21 Ocean Going Vessels	6	Houston	TX	$1,487,909	2010	The Manchester neighborhood adjacent to the Houston Ship Channel.

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Port of Corpus Christi	Repower existing 120 ton locomotive switch engine and develop & implement an anti-idling policy for locomotives in the port area	6	Corpus Christi	TX	$1,026,058	2010	Corpus Christi, Nueces, & San Patricio Counties
Port Authority of Houston	Replace 22 pieces of cargo handling equipment and repower 3 tour boats	6	Houston	TX	$611,466	2009	The Manchester neighborhood adjacent to the Houston Ship Channel.
Railroad Research Foundation	Repower four locomotives	6	Baton Rouge	LA	$2,927,496	2009	City of Baton Rouge, East Baton Rouge Parish
Houston-Galveston Area Council	Establishes revolving loan program to help regional and short haul owner-operators and related small businesses purchase and operate cleaner more fuel efficient trucks	6	Adjacent port communities	TX	$9,000,000	2009	Adjacent port communities
City of Irving	Retrofit 25 city service on-highway vehicles using emerging technologies.	6	Irving	TX	$937,605	2009	Irving
Houston Advanced Research Center	Retrofit a marine vessel that operates between Baton Rouge and Houston with emerging technologies and monitor emissions.	6	Houston	TX	$1,556,733	2009	Adjacent port communities

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Houston Advanced Research Center	Retrofit 20 publicly owned diesel vehicles in Texas with emerging technologies and monitor their emissions.	6	Houston	TX	$2,000,000	2009	Adjacent port communities
University of Houston	Retrofit 15 school buses with emerging technologies and test with portable emission measurement system	6	Houston	TX	$1,186,767	2009	Houston
University of Houston	Retrofit municipal trucks with emerging technologies	6	Houston	TX	$1,421,621	2009	Houston
Grace Hill Settlement House	CCV retrofits on 520 school buses serving St. Louis City children; training of 460 bus drivers on idle reduction; conduct public school Be Idle Free poster art contest K thru high school; No Idling Zones at schools	7	St. Louis	MO	$454,849	9	North St. Louis City: neighborhoods of Old North St. Louis, Hyde Park, College Hill
Grace Hill Settlement House	Approximately 809 tons emissions reduced annually through retrofits and repowers of 574 mobile units; training drivers; 11 summer interns serve at and paid by retrofit companies; 2 neighborhood meetings	7	St. Louis	MO	$2,000,000	10	North St. Louis City: neighborhoods of Old North St. Louis, Hyde Park, College Hill
Missouri State Clean Diesel Project	KC Public Works retrofitted 22 utility trucks with DOC mufflers.	7	Kansas City	MO	$34,007	2009	Scarrett Point, North Indian Mound, Indian Mound

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Missouri State Clean Diesel Project	Dallas County School District is implementing an early school bus replacement for one bus.	7	Buffalo	MO	$18,500	2011	Rural Buffalo
Missouri State Clean Diesel Project	Riverview Gardens School District is retrofitting 16 school buses with fuel operated heaters	7	Riverview Gardens	MO	$29,020	2011	Moline Acres, Bellefontaine Neighbors
Missouri State Clean Diesel Project	Normandy School District is retrofitting 16 school buses with fuel operated heaters	7	Normandy	MO	$29,020	2011	Normandy, Pasadena, Pasadena Hills, Northwoods
MoDOT Clean Diesel Project	Retrofitting or replacing 135 diesel vehicles in MoDOT's fleet for District 4 (Kansas City), District 6 (St. Louis) and District 8 (Springfield)	7	St. Louis, Kansas City and Springfield	MO	$726,227	2009, 2010, 2011	Many could potentially be positively affected by this grant.
ARRA State Clean Diesel Project (Missouri)	St. Louis Special School District retrofitted 31 school buses that transport special needs students to and from school with fuel operated heaters.	7	St. Louis	MO	$47,353	2010	Olivette and Overland
ARRA State Clean Diesel Project (Missouri)	UPS is implementing early replacements for four older delivery trucks	7	St. Louis	MO	$50,000	2010, 2011	Abuts Downtown West, Midtown, The Gate and Lafayette Square
ARRA State Clean Diesel Project (Missouri)	Subsurface Constructors is repowering a drill rig from a tier I engine to a tier III engine.	7	St. Louis	MO	$24,302	2010, 2011	North Riverfront, Near North Riverfront, Hyde Park, College Hill

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ARRA State Clean Diesel Project (Missouri)	KC Southern Railways is retrofitting 5 switch engine locomotives with automatic engine shutdown/startup devices to reduce idling.	7	Kansas City	MO	$43,084	2010	Scarret Point, North Indian Mound, Indian Mound
ARRA State Clean Diesel Project (Missouri)	OF & S Trucking retrofitted two tractor trailers with low rolling resistance tires	7	Buffalo	MO	$6,207	2010	Rural Buffalo
ARRA National Clean Diesel Project (Missouri Metropolitan)	Neosho School District retrofitted 12 school buses with DOC mufflers	7	Neosho	MO	$12,052	2010	Neosho
ARRA National Clean Diesel Project (Missouri Metropolitan)	Riverview Gardens is retrofitting 24 school buses with DOC mufflers	7	Riverview Gardens	MO	$26,544	2010, 2011	Moline Acres, Bellefontaine Neighbors
ARRA National Clean Diesel Project (Missouri Metropolitan)	Normandy School District is retrofitting 3 school buses with DOC mufflers	7	Normandy	MO	$3,318	2010, 2011	Normandy, Pasadena, Pasadena Hills, Northwoods
ARRA National Clean Diesel Project (Missouri Metropolitan)	Breckenridge Material retrofitted 10 concrete mixers with partial flow-thru filter mufflers.	7	St. Louis	MO	$60,000	2010	Brentwood
Missouri Green Fleet Project	Hazelwood School District will be retrofitting 50 school buses with fuel operated heaters.	7	Hazelwood	MO	$100,000	2011	Hazelwood
Missouri Green Fleet Project	Dallas County School District is retrofitting 20 school buses with both diesel oxidation catalyst mufflers and fuel operated heaters.	7	Buffalo	MO	$68,000	2011	Rural Buffalo

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Missouri Green Fleet Project	BNSF Railways is retrofitting 3 switch engine locomotives with automatic engine shutdown startup devices and auxiliary power units.	7	Kansas City	MO	$143,250	2011	Communities near rail yard
ARRA09N_Lincoln Lancaster County Health Dept.	Retrofit 196 publicly owned vehicles and equipment including emergency generators and school buses; repower eight switch engines; retrofit used cement mixers	7	Lincoln	NE	$1,000,000	2009	Havelock, NE.
Montana Dept. of Environmental Quality (partnering with Decker Coal Company)	Repower four coal dump trucks	8	Helena	MT	$700,000	2009	Lewis & Clark County
Utah Dept. of Environmental Quality	47 DOCs/CCV combo	8	Salt Lake City	UT	$126,000	2007	Cache, Box Elder, Juab Counties
Colorado Dept. of Public Health and Environment	98 Pre-heaters, DOC/CCF's	8	Colorado Springs	CO	$400,000	2008	El Paso County
City and County of Denver	31 Fuel-Operated Hydraulic & Cab Heater Combos, 23 Fuel operated Cab Heaters	8	Denver	CO	$200,000	2008	Denver county
Regional Air Quality Council	40 APU's, 25 Idle Reduction Timers, 40 DOC/CCF Combos, 5 Engine Repowers	8	Denver	CO	$455,645	2008	Denver county
Utah Dept. of Environmental Quality	190 DOC/CCV's	8	Salt Lake City	UT	$399,955	2008	Tooele, Washington, Sanpete counties
Colorado Dept. of Public Health and Environment	46 DOC's/CCF's	8	Glenwood Springs	CO	$196,880	2008	Garfield, Huerfano, Delta Counties
Montana Dept. of Environmental Quality	8 new buses	8	Missoula	MT	$295,320	2009	Yellowstone, Lewis and Clark Counties

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N. Dakota Dept. of Health	4 new buses	8	Bismark	ND	$196,880	2008	Burleigh county
S. Dakota Dept. of Environment and Natural Resources	75-80 DOC's	8	Custer	SD	$196,880	2008	Custer county
Utah Dept. of Environmental Quality	219 DOC/CCV's	8	Salt Lake City	UT	$295,320	2009	Washington, Juab, Piute, Uintah Counties
Utah Dept. of Environmental Quality	20 DOCs 20 CCVs	8	Salt Lake City	UT	$40,000	2007	Washington, Cache, Salt Lake counties
Colorado Dept. of Public Health and Environment	180 APUs	8	Denver	CO	$850,000	2009	Denver, CO
Colorado Dept. of Public Health and Environment	350 DOCs & CCVs, 350 Heaters	8	Greely, Colorado Springs	CO	$1,730,000	2009	Weld, El Paso counties
Cascade Sierra Solutions	51 DPFs, 105 APUs	8	Denver, Salt Lake City	CO/UT	$850,000	2009	Denver and Salt Lake counties
City and County of Denver	57 Heaters; 53 DOCs & CCVs; 262,844 gal. of biodiesel	8	Denver	CO	$700,000	2009	Denver county
Mid-Dakota Education Cooperative	9 Replacements, 66 Heaters	8	Minot	ND	$450,000	2009	Ward county
Montana Dept. of Environmental Quality	31 Replacements	8	Helena	MT	$1,730,000	2009	Yellowstone, Lewis and Clark Counties
N. Dakota Dept. of Health	40 Replacements	8	Bismark	ND	$1,730,000	2009	Burleigh county
Regional Air Quality Council	20 DOCs, 56 Heaters, 100 APUs, 1 Repower, 1 DOC & CCV, 44 Thermal Coolers, 30 SmartWay Tires and/or Gap Fairings	8	Denver	CO	$1,250,000	2009	Denver county
S. Dakota Dept. of Environment and Natural Resources	74 Replacements	8	Pierre	SD	$1,730,000	2009	Custer, Dewey, Lyman counties
Utah Dept. of Environmental Quality	12 Replacements, 21 Repowers, 30 APUs	8	Salt Lake City	UT	$750,000	2009	Salt Lake County

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Utah Dept. of Environmental Quality	21 Replacements, 306 Docs & CCVs	8	Salt Lake City	UT	$1,730,000	2009	Box Elder, Washington, Tooele counties
Wyoming Department of Environmental Quality	10 Replacements, 500 DOCs & CCVs	8	Laramie	WY	$1,730,000	2009	Albany county
Montana Dept. of Environmental Quality (partnering with Decker Coal Company)	Repower four coal dump trucks	8	Helena	MT	$700,000	2009	Lewis & Clark County
DERA 2008 South Coast Retrofits	Retrofit 700 1999-2002 model year long haul heavy-duty diesel trucks with diesel particulate filters (DPF), which have been verified by the California Air Resources Board (CARB). This project will involve trucks that move goods throughout the Los Angeles and Inland Empire corridor between major distribution facilities and retail establishments. The SCAQMD will leverage over $7 million for this project.	9		CA	$1,000,000	2008	Inland Empire, Los Angeles

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2008 State DERA Grant: NV: Nevada State Clean Diesel Program - School Bus Retrofit Initiative	The Nevada State Clean Diesel Program - School Bus Retrofit Initiative is focused on reducing emissions from diesel powered school buses across the state. The program has two fundamental goals: 1) to reduce the exposure of school-age children to particulate matter and other harmful components of diesel exhaust emissions from school buses, and 2) to reduce particulate matter emissions to help improve and maintain air quality in communities across Nevada. School districts located in urban, suburban, and rural settings will be eligible to apply for this voluntary program. Buses that qualify for the program will be retrofitted with a Diesel Oxidation Catalyst and if feasible a Closed Crankcase Ventilation System selected from the EPA Verified Technology list.	9		NV	$423,292	2008	Clark County, NV

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2008 State DERA Grant: AZ: Promoting Anti-Idling Technology Along the Arizona-Sonora Border	The Arizona Department of Environmental Quality (ADEQ) is implementing a program to promote idle reduction technology through outreach methods and grant initiatives for technology deployment in efforts to establish three TSE sites equipped with electrified parking spaces (EPS) within the parameters of inland ports of entry (POE) / trade corridors by the end of September 2010. The pilot grant program will focus on Arizona's border counties of Santa Cruz, Yuma, and Cochise. ADEQ anticipates collecting data on the amount of emissions reduced by TSE, and evaluating how TSE plays an important role in improving air quality within the region.	9		AZ	$423,292	2008	Arizona Border Region (Nogales)

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California Airports Partnership - Air Quality Improvement Partnership	Each of the four airports included in this project will conduct separate and different retrofit/replacement actions.- Los Angeles International AirportLAX will replace seven (7) diesel passenger buses with CNG models. The current buses are 1996 Cobus, Model 300 EOA11A buses with Mercedes 6 liter off-road engines. The replacement buses will be 2009 MY 60-foot NABI articulated buses with 320 hp Cummins-Westport ISL-G engines. These buses are used on the airfield to shuttle passengers from terminal to terminal.- Oakland International AirportOAK will retrofit ten (10) 1999 model year Gillig 35-foot shuttle buses equipped with Cummins ISC 280 horsepower engines with Cleaire Horizon-M particulate filters.- San Diego International AirportSAN plans to retrofit five (5) different on-field, off-road vehicles with particulate filters- San Francisco International AirportSFO has an ambitious plan that contains a mix of fuel price differential, diesel engine replacements with CNG models, and diesel retrofit devices.	9	Pasadena, Oakland, Los Angeles	CA	$895,827	2008	West Oakland, Los Angeles, San Diego

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City of Phoenix Transit Bus Engine Repower Project	Repower and add a DPF to 20 transit bus engines. The hydraulic engine cooling system will be replaced with an electric cooling system.	9	Phoenix	AZ	$553,604	2008	Phoenix, AZ
2008 State DERA Grant: HI: Diesel Retrofits for the State of Hawaii	retrofit of 15-20 city/county vehicles	9	Honolulu	HI	$423,292	2008	Honolulu, HI
Fleet Modernization Program for Medium and Heavy Duty Hybrid Trucks and Hybrid School Buses	Replace 6 existing trucks and 8 school buses with plug-in hybrids.	9	Sacramento	CA	$553,360	2008	Sacramento County
2008 State DERA Grant: CA: Replace Caltrans On-Highway Heavy Duty Diesel Vehicles	The California Air Resources Board (ARB) proposes to pass through this grant award to the California Department of Transportation (Caltrans) to assist the Caltrans complete early compliance with the ARB Public Fleet Rule. Replacing 12 early 1990s model year on-road heavy-duty vehicles with 2009 model year vehicles equipped with 2007-2009 model year engines	9		CA	$634,938	2008	Los Angeles, San Joaquin Valley
Leading the Way to Cleaner Air - CNG School Buses	The Kern County Superintendent of Schools and Delano Union School District will replace six 1987-89 model year school buses with CNG buses.	9	Bakersfield	CA	$540,000	2008	Kern County, CA (SJV)

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Emerging Technology DERA FY 2009 CARB - Caterpillar Locomotive Selective Catalytic Reduction	Apply Selective Catalytic Reduction to Caterpillar Locomotive 3516, 3005 HP engines certified to Tier 2 standards.	9		CA	$1,172,983	2009	Los Angeles
Emerging Technology DERA FY 2009 Advance Maritime Emission Control Systems - Bonnet	Pilot testing Advanced Maritime Emissions Control System (AMECS) designed to capture and treat the exhaust emissions from ocean ocean-going vessels.	9	Los Angeles	CA	$1,500,000	2009	San Pedro Bay Port Communities (Los Angeles)
Tribal National Program Clean Diesel DERA FY 2009 - Soboba Band of Luiseno School Bus	Retrofit 6 school buses with diesel particulate filters	9	San Jacinto	CA	$78,000	2009	Soboba Band of Luiseno
Tribal National Program Clean Diesel DERA FY 2009 - Morongo Band Of Mission Indians	Retrofit 6 School buses with diesel particulate filters	9	Banning	CA	$250,000	2009	Morongo Band Of Mission Indians
Repower locomotives in the San Francisco Bay Air Basin	Repower 1 switch (yard) locomotive operating in the San Francisco Bay Air Basin with 3 new Tier-3 nonroad engines (genset switch locomotive repower).	9	San Francisco	CA	$1,000,000	2009	West Oakland, Bay View Hunters Point
City of Los Angeles, EcoCrane Hybrid Systems	Installation of EcoCrane Hybrid Systems by EcoPower Hybrid Systems Inc. at City of Los Angeles.	9	Los Angeles	CA	$731,298	2009	San Pedro Bay Port Communities (Los Angeles)

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
San Diego County APCD Lower-Emission School Bus Program	Retrofit, replace, and repower 125 high-polluting school buses with newer, cleaner engines and filters. The buses proposed to be replaced are 23 to 35 years old and the replacement buses will have an expected lifetime of 20 to 25 years. Identified as an area with toxic air pollutant concerns due to its proximity to a port, a rail yard, and a major freeway, San Diego's Barrio Logan neighborhood contains 14 public schools. Additionally, SDAPCD has identified 45 other zip codes that contain Environmental Justice Areas which exceed the state PM10 standard and have an average income of 80 percent or less of the median income in San Diego County. Countywide, there are a total of 423 public schools served by 21 school districts within these Environmental Justice Areas. Approximately 70 percent of the buses included in this program are operated by school districts that serve these Environmental Justice Areas.	9		CA	$1,563,652	2009	Barrio Logan neighborhood
Port of Long Beach and Tenants	The Port of Long Beach Diesel Emissions Reduction Project was selected for $4,008,250 in funding to implement a large-scale diesel emission reduction project involving equipment replacements, engine repowers, and/or engine retrofits for 112 pieces of cargo handling equipment including rubber-tired gantry cranes, and two harbor craft currently in operation at the port.	9	Long Beach	CA	$4,008,250	2009	San Pedro Bay Port Communities (Los Angeles)

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Reducing Diesel Emissions at Port of Oakland	The EPA has selected the Bay Area Air Quality Management District for $2 million in funding to retrofit 81 trucks with Diesel Particulate Filters (DPFs) and replace 22 dirty, old trucks with cleaner, newer ones that operate at and around the Port of Oakland.	9	Oakland	CA	$2,000,000	2009	West Oakland, Bay View Hunters Point
Emerging Technology ARRA South Coast 90 Truck Retrofits with Selective Catalytic Reduction Technology	This assistance agreement provides funding to the South Coast Air Quality Management District under the American Recovery & Reinvestment Act of 2009. This project will retrofit 90 Class 8B heavy-duty, on-highway, diesel trucks with the Johnson Matthey Selective Catalytic Reduction Technology. The project will take place in the South Coast Air Basin and will work to reduce air pollutants such as particulate matter, nitrogen oxides, carbon monoxide, and hydrocarbon emissions. In addition, this project will create 19 jobs and provide long and short term economic benefits for the surrounding area.	9	Los Angeles	CA	$2,000,000	2009	Los Angeles county
Emerging Technology ARRA South Coast Retrofits with 90 Truck Catalytic Continuously Reduction Technology	This assistance agreement provides funding to the South Coast Air Quality Management District under the American Recovery & Reinvestment Act of 2009. This project will retrofit 90 heavy duty on-highway diesel trucks with the Johnson Matthey Selective Catalytic Continuously Reduction Technology. The project will take place in California's South Coast Air Basin. 19 direct jobs will be created in the first two years.	9	Los Angeles	CA	$2,000,000	2009	Los Angeles county

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
2009: California School Bus Retrofits	The California Air Resources Board will execute grant agreements with selected air districts to complete approx. 80 diesel retrofits on school buses within their district boundaries. The emission reduction of each retrofit device is an 85% reduction in PM emissions.	9		CA	$1,730,000	2009	multiple counties in Los Angeles, San Joaquin, and San Diego
Arizona Department of Environmental Quality	Under the American Recovery and Reinvestment Act of 2009 funding for the State Clean Diesel Grant Program, the U.S. EPA funded the Arizona Department of Environmental Quality (ADEQ) $1,730,000 to install electric systems to prevent heavy-duty truck engine idling along the Arizona-Mexico border and rest stops in southern Arizona. 80 truck parking spaces. These systems will be located at two ports of entry to Mexico and five rest stops in southern Arizona, which are designated as non-attainment or impaired for particulate matter.	9	Nogales	AZ	$1,730,000	2009	Communities along the AZ/MX border (Nogales, AZ)
San Joaquin Valley Unified Air Pollution Control District - School Bus Retrofit	The EPA has selected the SJVUAPCD for $4,000,000 in funding to replace 73 school buses model year ranging from 1977 to 1980. Thirty will have 2010 emission compliant CNG engines, while the remaining 43 will have 2007 or newer diesel engines. The affected counties are Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare.	9	Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare.	CA	$4,000,000	2009	Communities in Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare.

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
City of Phoenix	The EPA has selected the City of Phoenix Public Works Department for $829,697 in funding to retrofit 44 diesel trucks with diesel particulate filters (DPFs), and 1 truck diesel oxidation catalysts (DOC), and to replace an aging refuse hauler with a hydraulic launch assist refuse hauler. And to purchase a transit cleaning machine. The vehicles to be retrofitted will be run on ultra low sulfur diesel with 20 percent biodiesel. These vehicles provide a variety of services including emergency, park maintenance, street repair, and refuse collection, throughout various parts of the Phoenix metropolitan area.	9	Phoenix	AZ	$829,697	2009	Phoenix, AZ
CA DOT: Install DPF on 46 Nonroad Construction Equipment	The California Department of Transportation (Caltrans) was selected for $951,431 in funding to install Level 3 CARB verified diesel particulate filters on 46 Caltrans-owned construction equipment, including crawler tractors, excavators, forklifts, graders, rollers, rubber tire loaders, surfacing equipment, sweepers, scrubbers, tractors, loaders, and backhoes. This equipment will operate throughout California, however a large proportion will be located in the Los Angeles, San Bernardino, and Riverside Counties, as well as the Bay Area.	9		CA	$951,431	2009	Los Angeles, San Bernardino, and Riverside Counties, Bay Area (West Oakland and Bay View Hunters Point)

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Emerging Technology ARRA Selective Catalytic Reduction Trucking	This American Recovery & Reinvestment Act of 2009 funding is provided for the implementation of emerging technologies that achieve diesel emissions reductions. 33 class 8A privately-owned, long-haul diesel trucks that travel in the San Joaquin Valley will be retrofitted with emerging selective catalytic reduction technologies.	9		CA	$1,260,906	2009	San Joaquin Valley Ag Communities
San Joaquin Valley Unified Air Pollution Control District - Ag Offroad Repower	The EPA has selected the SJVUAPCD for $2,000,000 in funding to repower 30 agricultural off-road vehicles with new engines that meet or exceed EPA's tier 3 emission standards for nonroad diesel engines. This project is expected to significantly reduce particular matter (PM), nitrogen oxides, and carbon monoxide emissions.	9		CA	$2,000,000	2009	San Joaquin Valley Ag Communities
Port of Los Angeles Diesel Emission Reduction Projects for Equipment and Vessels	The City of Los Angeles Harbor Department, also known as Port of Los Angeles, was selected for $1,991,750 in funding to replace, repower, and/or retrofit a total of 24 pieces of equipment (27 engines), including harbor craft, currently in operation at the port. The emission reductions achieved from this project will improve air quality and health in the surrounding areas. (Note: 2 tug boats with 3 engines each are being affected, so total number of engines is 27, not 24)	9	Los Angeles	CA	$1,991,750	2009	San Pedro Bay Port Communities (Los Angeles), Willmington

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Nevada State Clean Diesel Program: School Bus Replacement Program	Replace the 17 oldest, highest mileage diesel school buses operated by each of the 17 school districts in Nevada. These districts comprise areas from the urban centers of Las Vegas and Reno, to the suburban areas surrounding the cities, to small towns and vast rural areas. Target model year: 1991 and older. Many of these older buses are operated by rural school districts. The oldest buses will be replaced with new buses meeting either 2007 or 2010 EPA emission standards (some manufacturers may have buses meeting 2010 standards available in 2009).	9	Reno; Las Vegas	NV	$1,730,000	2009	Reno; Las Vegas, NV
Hawaii State Clean Diesel Grant Program	The Department of Health will partner with the Department of Education to replace 7 vehicles (3 school buses, 4 trucks), University of Hawaii to replace 4 vehicles (2 refuse trucks and 2 dump trucks)	9		HI	$1,730,000	2009	Honolulu, HI
South Coast Repower 8 Locomotives	This project repowers eight older existing switch locomotives with new nonroad engines, also known as a generator set switch locomotive. Switch locomotives typically operate in and around rail yards to put trains together and move railcars locally between rail yards. The affected locomotives are owned by Union Pacific Railroad and BNSF Railway, and operate in the South Coast Air Basin.	9		CA	$8,888,888	2009	Los Angeles, CA

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Port of San Francisco Shore Side Power at Pier 27	Install a shoreside power system at Pier 27 for cruise ships. The project will consist of the design, purchase, and installation of a shore-to-ship electrical connection system with appropriate infrastructure to provide a dual voltage, 6.6 kV/11 kV system with design capacity of at least 16 megawatts for berthed cruise ships.	9	San Francisco	CA	$1,000,000	2010	San Francisco (Bay View - Hunter's Point); Oakland (West Oakland)
Arizona Clean Trucks	-Replace 8 heavy-duty Class 8a diesel delivery trucks with CNG trucks- Replace 2 heavy-duty Class 8a diesel over-the-road (OTR) tractors with 2010 clean diesel trucks- Replace 2 medium-duty Class 2 diesel route trucks with all-electric trucks- Retrofit 48 trailers and 49 tractors with SmartWay low-rolling resistance tiresThe 2 Frito-Lay private fleets operate in Phoenix, AZ (Maricopa/Pinal county) and in Casa Grande, AZ (Pinal county), located south of Phoenix in a major corridor between Phoenix and Tucson.Models of new technologies:CNG trucks: M2 112 conventional chassis with 2010 Cummins ISL-G enginesElectric trucks: Smith Electric Vehicle Newton ModelDiesel trucks: 2010 Volvo D13 enginesLow-rolling resistance tires: Bridgestone R280 (steer tires, tractors), Bridgestone M720 (drive tires, tractors), Bridgestone R195 (trailers)	9	Phoenix	AZ	$610,828	2010	Phoenix, AZ

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Hawaii 2010 Clean Diesel Initiative	To convert 60 paratransit buses from using ULSD to B20 Biodiesel fuel, and to install DPFs on 4 construction equipments (3 pavers and 1 roller) owned by Grace Pacific Corporation	9	Honolulu	HI	$300,000	2010	Honolulu, HI
On Road Heavy Duty Truck Replacement	Replace 48 on-road heavy-duty trucks which function as long haul transport, general delivery, bulk transport and general cargo. program	9	Fresno	CA	$1,796,474	2010	Fresno, CA (SJV)
SCAQMD School Bus Replacement Project	To replace 43 pre-1994 Type D diesel school buses with CNG buses powered by 2010 EPA and CARB compliant engines. The targeted fleet vehicles will be operated throughout the basin with an emphasis on the Wilmington area.	9	Wilmington area, SCAB	CA	$1,065,465	2010	San Pedro Bay Port Communities (Los Angeles), Willmington
Port of Los Angeles Flex-Grid System for Alternative Maritime Power	Non-grid-based shorepower. Flex-Grid System utilizes Guascor engine generators fueled by liquefied natural gas (LNG) to be used at the APL terminal. APL will retrofit 5 project vessels for shore power connectivity by mid-2010. EPA funding will be used to purchase equipment needed for the shore power infrastructure used by the system. This infrastructure will be 100 percent re-usable when grid-based electricity becomes available from the Los Angeles Department of Water and Power.	9	Los Angeles	CA	$1,212,838	2010	San Pedro Bay Port Communities (Los Angeles), Willmington

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Harbor Craft/Cargo-Handling Equipment Repower and Retrofit Project	This project will repower 3 vessels and 1 piece of cargo-handling equipment (a total of 7 engines) and retrofit 4 pieces of cargo-handling equipment. POLB is partnering with 2 harbor craft companies and three tenants for the project	9	Long Beach	CA	$1,648,035	2010	San Pedro Bay Port Communities (Los Angeles), Willmington
Repower Locomotives in the South Coast Air Basin	Repower 2 switch (yard) locomotives operating in the South Coast Air Basin each with 3 new Tier-3 nonroad engines (genset switch locomotive repowers). The repowered genset switch locomotives will be owned by UP and BNSF, or other railroads, and primarily operate in the South Coast Air Basin.	9	Los Angeles	CA	$1,949,496	2010	San Pedro Bay Port Communities (Los Angeles), Willmington
Repower locomotives in the San Joaquin Valley Air Basin	Repower 1 switch (yard) locomotive operating in the San Joaquin Valley Air Basin with 3 new Tier-3 nonroad engines (genset switch locomotive repower). The repowered genset switch locomotive will be owned by UP and BNSF, or other railroads, and primarily operate in the San Joaquin Valley Air Basin.	9	Fresno	CA	$1,000,000	2010	Fresno, CA (SJV)

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Repower locomotives in the San Francisco Air Basin	Repower 1 switch (yard) locomotive operating in the San Francisco Air Basin with 3 new Tier-3 nonroad engines (genset switch locomotive repower). The repowered genset switch locomotive will be owned by UP and BNSF, or other railroads, and primarily operate in the San Francisco Air Basin.	9	Richmond	CA	$1,000,000	2010	San Pedro Bay Port Communities (Los Angeles), Willmington
Emerging Technology FY 2008 Catalytic Regenerating Technology Trucking Project	This project will retrofit 43 heavy duty class 8 on-road diesel trucks with the Johnson Matthey Selective Catalytic Regenerating Technology. This emerging technology is estimated to reduce nitrogen oxides, particulate matter, carbon monoxide, and hydrocarbons. The project will help improve air quality in the South Coast Air Basin, which is in non-attainment for particulate matter 2.5 and 8-hour ozone.	9	Los Angeles	CA	$900,000	2008	Los Angeles
2008 State DERA Grant: WA: Clean Diesel Grant Program	The repowered genset switch locomotive will be owned by UP and BNSF, or other railroads, and primarily operate in the San Joaquin Valley Air Basin.	10	Seattle	WA	$295,320	2008	Communities adjacent to rail yard
Treasure Valleys Clean School Bus Project	The project will fund the installation of Environmental Protection Agency (EPA) or California Air Resources Board (CARB) verified retrofit exhaust emission control technologies on heavy-duty diesel school bus engines in Treasure Valley, Idaho.	10	Boise	ID	$500,000	2008	Vallivue and Nampa school districts in the Treasure Valley

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Puget Sound Ports Cargo-Handling Equipment Replacement and Retrofit Program	This project will retrofit 84 pieces of cargo handling equipment at the Puget Sound Ports of Tacoma and Seattle with a combination of diesel particulate filters or partial flow filters, and crankcase ventilation filters.	10	Seattle	WA	$850,000	2008	EJ communities affected are those in the Ports of Seattle and Tacoma areas
2008 State DERA Grant: OR: State Clean Diesel Grant Program	This project will fund diesel retrofits and repowers in Oregon. The project will support Oregon's clean diesel goal by 1.) reducing exposure to diesel emissions in the most populous area of the state and 2.) reducing exposure to diesel emissions by the most vulnerable populations.	10	Portland	OR	$295,320	2008	
Portland-Multnomah Clean Diesel Partnership	The project will fund the installation of verified retrofit exhaust emission control technologies on the City of Portland and Multnomah County's nonroad construction diesel fleet as well as on contractor owned, leased, or rented off-road construction equipment. The EPA funding will also be used to pilot a clean diesel contracting policy for construction contractors' requirements for a number of upcoming large-scale construction projects in areas of poor air quality.	10	Portland	OR	$498,726	2008	Small portion of grant located in northeast Portland

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Treasure Valley Clean School Bus Project	The project will fund the installation of verified retrofit exhaust emission control technologies on 50 school buses (operated by private contractors in the Treasure Valley) per funding period. It will also extend the implementation of an anti-idling program already being undertaken by the Idaho Department of Environmental Quality (IDEQ).	10	Boise	ID	$295,320	2008	EJ Communities affected: Lewiston, Blackfoot, and Madison (Rexburg) School Districts
State Clean Diesel Grant Program - Alaska DERA State Allocation	This project will increase the fuel efficiency of stationary source diesel power generation in small scale settings typical in Alaska villages. Additional projects under negotiation include powerplant retrofits, development/use of fish oil and waste vegetable oil derived biodiesel, Port of Anchorage retrofits and marine repower.	10	Anchorage	AK	$295,320	2008	EJ Community affected: Rural Alaska and Native Villages in the Fairbanks/Juneau area
Puget Sound Krystallon Marine Scrubber	Krystallon Particular Matter Seawater Scrubber installation.	10	Seattle	WA	$1,176,243	2009	Port of Seattle, South Seattle area
Cascade Sierra Solutions	This project will reduce diesel emissions by retrofitting heavy-duty diesel- powered vehicles with verified aerodynamic technologies in ID, OR, and WA. By deploying the technologies on trailers used in long-haul applications it will reduce diesel emissions by approximately 12% at highway speeds. This project will involve a total of 1,554 trailers.	10	Coburg	OR	$907,072	2009	EJ communities along I-5 corridor

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
City of Portland	This project will allow the purchase and installation of verified diesel particulate filters, partial flow filters and diesel oxidation catalysts on construction equipment. Fuel fired heaters are also proposed for equipment owned by Portland and Multnomah County. This funding will also be used to pilot a clean diesel contracting policy. This project will retrofit approximately 161 pieces of equipment and install 237 fuel-operated heaters which will reduce diesel emissions.	10	Portland	OR	$1,622,348	2009	Small portion of grant located in northeast Portland
Idaho ARRA Diesel Project	Retrofit 350 school buses or publicly owned vehicles with Level I retrofit technologies (oxidation catalysts and crankcase filtration systems) for a total of $700,000 or an equivalent number based on this amount with Level II and/or III retrofit technologies.Retrofit 75 school buses with anti-idling technology for a total of $200,000.Replace 14 school buses in publicly owned fleets for a total of $643,762.	10		ID	$1,730,000	2009	EJ Community affected: Ada County and American Falls, Blaine, Bliss, Bonneville, Culdesac, Firth, Garden Vly, Glenns Ferry, Hagerman, Idaho Falls, ISDB, Jerome, Kendrick, Kootenai, Lawai, MacKay, Marsing, New Plymouth, Notus, Payette, Potlatch, Rockland, So Lemhi, St. Maries School Districts.

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Oregon Department of Environmental Quality	Retrofit public municipal vehicles, transit vehicles, and construction equipment within one air quality non-attainment and one air quality maintenance area in OR. EPA funds will be used to retrofit approximately 200-280 diesel vehicles and equipment. DEQ anticipates retrofitted fleets to include municipal vehicles from Lane county, the city of Lake Oswego and the city of Milwaukee; Portland-area transit buses from Tri-Met; and construction equipment from construction equipment rental companies in the Portland metropolitan area.	10	Portland	OR	$1,730,000	2009	EJ Community affected: Beaverton / Klamath School District in North Portland; Lane Klamath, and Washington Counties

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Washington State Department of Ecology	Exhaust Emissions Controls, Engine Repowers and Engine Upgrades for Cargo Handling Equipment at Ports: Ecology will use about $1,223,205 of its 2009 DERA state allocation to purchase and install partial flow filters and diesel oxidation catalysts on cargo handling equipment at ports in Washington State. The Ports of Seattle and Tacoma, the Department of Ecology, the Puget Sound Clean Air Agency, and the Port's tenants are collaborating in a voluntary, non-regulatory program to reduce diesel emissions.Idle Reduction Technologies for Public Fleets: Ecology will use knowledge gained from these pilot projects to start a statewide idle reduction program for public fleets.	10		WA	$1,730,000	2009	

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
State of Alaska Department of Environmental Conservation	The project will retrofit equipment and replace vehicles operated and maintained by the Alaska Department of Transportation and the Alaska Railroad. ADEC will also request proposals for diesel anti-idling projects. The overall approach to spreading the funding will reduce emissions all over the state, and includes emission reduction work in Fairbanks, a non-attainment area for fine particulate. - Alaska Railroad: Upgrade 2 diesel/electric locomotives GP40-2 in 2010 to EPA Tier 1 compliance - DOT: Replace 3 1985 diesel equipment in Fairbanks - ADEC Grant Program: Install anti-idling (engine pre-heaters) on about 80 heavy-duty vehicles (buses, trucks)	10	Seward; Whittier, Anchorage, Talkeetna, Denali National Park, and Fairbanks	AK	$1,730,000	2009	EJ Community affected: Whittier, Anchorage, Talkeetna, Denali National Park, Fairbanks area
Port of Tacoma	This project will install a shore-side electrical connection system and alternative maritime power at the Totem Ocean Trailer Express (TOTE) Terminal in Tacoma. TOTE will retrofit two ocean-going vessels and add certified ship-side technology. This will eliminate diesel emissions from two vessels while at berth in the Port of Tacoma.	10	Tacoma	WA	$1,488,080	2009	adjacent to Puyallup tribal reservation

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Puget Sound Clean Air Agency	This project will reduce particulate matter, hydrocarbon and carbon monoxide emissions from two private marine harbor vessels	10	Seattle	WA	$739,577	2009	EJ communities affected: Puget Sound region most specifically communities around the Ports of Seattle and Tacoma
Puget Sound Clean Air Agency	This project repowers 3 Burlington Northern Santa Fe (BNSF) locomotive switcher engines operating in the Puget Sound region a non-attainment area for particulate matter and EPA ranked in the top 5 percent nationally for potential cancer risk from air toxics.	10	Seattle	WA	$2,534,511	2009	EJ communities affected: Puget Sound region most specifically communities around the Ports of Seattle and Tacoma.

Recipient	Project Description	EPA Region	City	State	EPA Funding	FY	Names of EJ Communities Potentially Affected by DERA Grants
Idle Reduction for School Buses	This project achieves significant diesel emission and greenhouse gas reductions by providing and installing EPA verified, engine pre-heater and cabin heaters on 230 public school buses at eleven school districts in Washington State	10	Olympia	WA	$875,972	2010	EJ Communities Affected: School Districts in; Kelso, Tonasket, Central Valley, East Valley, West Valley (Spokane) and East Valley, Naches, Wapato, West Valley (Yakima)
Green Machines Program	Replace 21 1991-1995 model year diesel trucks with 2010-2011 clean diesel trucks Replace 20 1990-2001 model year diesel trucks with 2008-2011 diesel electric hybrid truck Partners: Coca-Cola Enterprises, Inc. (Coca-Cola) and Pacific Shredco, LLC (Shred-It)-	10	Portland	OR	$482,476	2010	Communities affected: Portland OR metro and Seattle/Tacoma WA urban areas

Appendix D
Acronyms

AAMG	Ambient Air Monitoring Group
AAPA	American Association of Port Authorities
ARRA	American Recovery and Recovery Act
ASHTO	American Association of State of Highway Transportation
CAA	Civil Aviation Authority
CAO	Civil Aviation Organization
CARB	California Air Resources Board
CARE	Community Action for a Renewed Environment
CARRI	Community and Regional Resilience Institute
CBO	Central Business Office
CFS	Community Facilitated Strategies
CG	Collaborative Governance
CMAQ	Congestion Mitigation and Air Quality
CRA	Community Reinvestment Act
CSATAM	Community-Scale Air Toxics Ambient Monitoring
DATI	Detroit Air Toxics Initiative
DEARS	Detroit Exposure and Aerosol Research Study
DEQ	Diesel Emissions Quantifier
DERA	Diesel Emission Reduction Act
DNR	Emission Control Area
DOT	Energy Policy Act
DTSC	Department of Toxic Substances Control
ECA	Emissions Control Area
ECOS	Environmental Commissioners of the States
EFAB	Environmental Financial Advisory Board
EHC	Environmental Health Coalition
EJ	Environmental Justice
EMS	Environmental Management System
Epact	Energy Policy Act
FAA	Federal Aviation Administration
FACA	Federal Advisory Committee Act
FDIC	Federal Deposit Insurance Corporation
FHWA	Federal Highway Administration
FLEET	SmartWay's model for fleet assessment
FRA	Federal Railroad Administration
GETF	Global Environment & Technology Foundation

GIS	Geographic Information System
HAD	Health Assessment Document
HAP	Hazardous Air Pollutant
HEI	Health Effects Institute
HHS	Health and Human Services
HIA	Health Impact Assessment
HRA	Human Resources Administration, Housing and Redevelopment Authority
HUD	Housing and Urban Development
ICAO	International Civil Aviation Organization
ICC	Interstate Commerce Commission
IDHA	International District Housing Alliance
IMO	International Marine Organization
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
NAAQA	National Ambient Air Quality Act
NAAQS	National Ambient Air Quality Standards
NCDC	National Clean Diesel Campaign
NCER	National Center for Environmental Research
NCI	National Cancer Institute
NEDC	Northeast Diesel Collaborative
NEJAC	National Environmental Justice Advisory Council
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NIEHS	National Institute of Environmental Health Sciences
NIOSH	National Institute of Occupational Safety and Health
NO2	nitrous oxide
NRDC	Natural Resources Defense Council
NVFEL	National Vehicle, Fuels and Emissions Laboratory
OAQPS	EPA's Office of Quality Planning and Standards
OAR	EPA's Office of Air and Radiation
OECA	EPA's Office of Enforcement and Compliance Assurance
OEJ	EPA's Office of Environmental Justice
OFA	Office of Federal Activities
OPEI	Office of Policy, Economics and Innovation
ORD	Office of Research and Development
OTAQ	Office of Transportation and Air Quality
PM	particulate matter
RFA	Request for Application
RFP	Request for Proposal

RLF	Regional Leadership Forum
SDEV	Southwest Detroit Environmental Vision
SEP	Supplemental Environmental Project
SIP	State Implementation Plan
STAR	Science to Achieve Results
TRB	Transportation Research Board
TRI	Toxics Release Inventory
TrIPS	Trucking Industry Particle Study
ULSD	Ultra Low Sulphur Diesel
VOCs	Volatile Organic Compounds