2012 Environment and Sustainability Summary
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Amtrak 2012 Environment and Sustainability Summary

I. Overview .................................................................................................................................................. 2

II. Making Tracks Toward Sustainability
   Development of a Sustainability Policy and Program ...................................................................................... 3
   Public Commitments to Sustainability .............................................................................................................. 4

III. Amtrak Strategic Plan Elements
   ENVIRONMENT AND ENERGY .................................................................................................................. 5
       Governance: Environmental Management System ......................................................................................... 5
       Environmental Program Highlights ............................................................................................................... 6
       Environmental Audit and Assessment Program ............................................................................................... 7
       Environmental Communications ..................................................................................................................... 8
       Energy Reduction and Fuel Conservation Measures ....................................................................................... 9
       Recycling .................................................................................................................................................. 10
       Climate Initiatives .................................................................................................................................... 11
       Departments Reduce Paper Use .................................................................................................................. 12
       Waste Management ................................................................................................................................ 12
       2012 Environmental Incidents and Spills ....................................................................................................... 12
       Strategic Fleet Management ......................................................................................................................... 14

   MOBILITY AND CONNECTIVITY ............................................................................................................... 15
       Accessible Stations Development .................................................................................................................... 15
       Hudson Line ............................................................................................................................................... 15
       State Supported Services ............................................................................................................................... 16

   FINANCIAL AND ORGANIZATIONAL EXCELLENCE ............................................................................... 16
       Environmental Capital Projects and Remediation ............................................................................................ 16
       Superstorm Sandy Preparation and Recovery Planning .................................................................................. 17
       Amtrak Aids Communities in Sandy Recovery Efforts ................................................................................ 18
       Walking and Health Programs ..................................................................................................................... 19

   CUSTOMER FOCUS .................................................................................................................................. 20
       Waste Reduction and On-Board Recycling ....................................................................................................... 20
       eTicketing .................................................................................................................................................. 20
       Sustainability in Food and Beverage Services ................................................................................................ 21

   SAFETY AND SECURITY .......................................................................................................................... 21
       Highlights of the Amtrak Safe-2-Safer Program ............................................................................................ 21

IV. Environment and Sustainability Presentations and Papers ........................................................................... 22
Overview

Since 2000, Amtrak has published an annual Environmental Report describing the implementation of the company’s Environmental Management System (EMS) and providing information relating to our environmental performance and goals for the future. From 2004 through 2011, the annual report encompassed the programs, goals and metrics of a combined Environmental Health and Safety Department.

In an organizational change in 2012, the environmental function became part of the Amtrak Law Department. This reorganization is part of the Amtrak Strategic Plan (FY2011 - FY2015), released in November 2011, which is designed to help Amtrak focus on performance improvements for customers, partners and employees.

The Environmental Group of the Law Department will continue its leadership in implementing the Amtrak Environmental Policy across all business lines and operations. The Policy, which was revised in 2010 and is signed by Amtrak President and Chief Executive Officer Joseph Boardman, states that Amtrak is committed to operate the national passenger railroad system in a manner that is fully in compliance with applicable environmental laws and regulations, and with practices that increase efficiency, reduce impacts and promote the sustainable use of resources.

This framework for implementing the Amtrak Environmental Policy is the EMS, in place since 2000. In the past few years, the Environmental Group has utilized the EMS framework to incorporate a number of sustainability initiatives, broadening the environmental perspective to encompass social and economic goals and to support the goals of the Amtrak Strategic Plan.

This Environment and Sustainability Summary highlights the activities, accomplishments and challenges during 2012, primarily in the area of environmental performance. The Summary also spotlights an array of sustainability initiatives and programs, including greenhouse gas emissions reduction, energy and fuel efficiency, accessibility and mobility for passengers, waste reduction, and adaptation to climate changes such as the potential impact of severe storms. The title of this annual summary, 2012 Environment and Sustainability, reflects the expanded scope and our commitment to continual improvement.
**Development of a Sustainability Policy and Program**

Corporate Sustainability is a business approach that creates long-term stakeholder value by not only using “green” strategies to achieve environmental objectives, but by considering every impact created by a business decision or activity in the economic and social environment. This approach is used to balance the immediate needs of the organization with the needs of future generations. With this in mind, Amtrak has begun development of a corporate Sustainability Policy and Program. As the Sustainability Program evolves, the company will seek to incorporate environmental, economic, and social sustainability considerations into Amtrak business decision-making processes and operations. The Policy and Program utilize the EMS framework and governance structure and support Amtrak’s five-year Strategic Plan as well as other public sustainability commitments that the company has made over the past ten years.

The Amtrak Strategic Plan (FY 2011 – FY 2015) states a clear vision for a sustainable national railroad:

> Amtrak is America’s first intercity travel choice for connections to and between the nation’s key metropolitan areas, providing customer-driven, safe, environmentally-sustainable, energy-efficient and inter-modally linked service to passengers, communities and partners. Through recognized organizational excellence, Amtrak’s diverse and talented team will lead the development and growth of the high-speed and intercity passenger rail system in North America.

Within this vision statement are five elements that serve as core strategic themes for the company:

- Environment and Energy
- Mobility and Connectivity
- Financial and Organizational Excellence
- Customer Focus
- Safety and Security

Each of these subject areas has associated objectives and measures, such as fuel and energy reduction goals associated with the Environment and Energy element. Additionally, Amtrak has been proactive on a number of sustainability initiatives in the United States rail industry, including charter membership in the Chicago Climate Exchange (CCX) in 2003, commitments with the American Public Transportation Association (APTA) and The Climate Registry (TCR) in 2009, and a commitment to the International Union of Railways (UIC) in 2011. Development of a corporate Sustainability Policy and Program in support of the five-year Strategic Plan as well as these sustainability initiatives is a natural step in advancing and formalizing Amtrak’s commitment to conducting its operation in a sustainable way and creating a sustainable transportation system for the future.
Amtrak signed onto the American Public Transportation Association (APTA) Sustainability Commitment in 2009 as one of the founding signatories. The signatories committed to developing core internal processes and actions that set the basis for continual improvement in the areas of environmental, social and economic sustainability. Signatories can obtain higher recognition levels of the commitment by completing additional actions, putting long-term processes into place and attaining reduction targets for a series of set indicators. In December 2012, Amtrak applied for the Bronze recognition level under this program by demonstrating achievement of the core principles and action items, and by setting specific reduction goals for fuel and energy consumption.


The Amtrak 2012 Environment and Sustainability Summary is structured to highlight environmental and sustainability achievements and challenges for Amtrak during 2012 in each of these five key areas:

- Environment and Energy
- Mobility and Connectivity
- Financial and Organization Excellence
- Customer Focus
- Safety and Security
ENVIRONMENT AND ENERGY

Governance: Environmental Management System

The Amtrak EMS has been in place since 2000 and provides a comprehensive approach to environmental management and continual improvement. The core programs of the EMS include an environmental compliance auditing program; guidance documents and standard operating procedures for facility environmental management and pollution prevention; communications and training programs; and an Environmental Information System (EIS). The EMS also establishes goals and objectives and tracks progress in the areas of environment and sustainability.

In 2012, Amtrak engaged an outside firm to conduct a comprehensive EMS Program Review. An external review by a third party is performed every five years to identify gaps with regard to existing EMS elements and goals and to review the EMS against the requirements of ISO 14001:2004, the international EMS standard, to identify areas for improvement.

The project team conducted interviews with personnel from a range of departments and functions including Environmental, Engineering, Mechanical, Finance, Legal, Government Affairs, Marketing, and Materials Management, from across the country. The interviews included Responsible Amtrak Officials (RAO), Senior Environmental Coordinators (SEC), field Environmental Coordinators, and members of the EMS Steering Committee and the Environmental Executive Oversight Committee (EEOC). The project team also observed operations in the Ivy City Maintenance Facility located in Washington, DC, and visited Amtrak offices and stations in several locations.

The EMS Program Review concluded that Amtrak has implemented a mature EMS that is integrated into many aspects of Amtrak operations. The positive highlights of the review include the following:

- Amtrak management has fostered a culture of overall cooperation and interest in continuously improving the management of environmental impacts and requirements.
- Amtrak has set ambitious Environmental and Sustainability goals for 2012. Although there is also a gap identified with implementation of objectives and targets, Amtrak took a positive step forward by setting Board level objectives and targets [as established in the Strategic Plan.]
The EMS Program Review identified several gaps that should be addressed to advance the EMS to the next level. The Amtrak Environmental Group worked with the EMS Steering Committee to develop an action plan that addresses opportunities for improvement in the following areas:

- Establishing a clear process for tracking other requirements such as public commitments to climate and sustainability goals in addition to environmental requirements.
- Better use of the Environmental Review procedure, which identifies environmental regulatory issues and requirements at the beginning of new projects and activities.
- Establishing metrics for tracking progress on environmental and sustainability initiatives that support strategic goals – e.g., climate initiatives, recycling programs, energy and fuel use.
- Clarifying environmental roles and responsibilities among departments at multi-department facilities.
- Improving processes for delivering and tracking environmental training for employees at multiple locations.
- Improving utilization of the Environmental Information System and Facility Environmental Manuals for managing facility environmental information.
- Updating and communicating procedures for managing records and documents in multiple formats, including paper files and electronic files.

Environmental Program Highlights

In 2012, the Environmental Group completed major revisions to the following EMS program documents:

- Direct-to-Locomotive Fueling Operations and Inspections Procedure (formerly Vendor Fueling) – covers proper procedures for fueling locomotives from tank trucks, by vendors or Amtrak employees, quarterly fueling inspections, and training.
- New Facility Environmental Manual template – provides a facility-specific manual covering environmental regulatory and other requirements and detailing facility-specific responsibilities and activities.

In 2012, the Environmental Group issued the following new training and awareness programs:

- Major revision and update of the General Environmental Awareness course, which reviews Amtrak activities and compliance requirements and employee responsibilities. New sections were added to increase employee awareness of current Amtrak sustainability goals and initiatives in the areas of climate, fuel and energy management, new technologies, recycling, and other topics. The course is available to all employees through either computer-based training (CBT) or classroom training.
Environmental Program Highlights

- New training program on Hazardous and Universal Waste Management for inclusion in the annual Engineering Department training camps. The camps reach approximately 3,000 Engineering employees annually.

- A package of updated regulatory training programs developed by an environmental training firm was issued to each Senior Environmental Coordinator and field Environmental Coordinator to assist them in delivering training classes on topics including stormwater permits and plans, oil spill prevention plans, and universal waste. The presentation materials supplied with the kits can be customized to include facility-specific information and requirements.

Environmental Audit and Assessment Program

During FY 2012 (October 2011 through September 2012), 19 environmental compliance audits were performed as part of the Amtrak EMS. The average Environmental Audit Score for FY 2012 was 76.8, which is below the corporate goal of 82. The environmental audit program measures performance against regulatory and management standards, reports findings of non-conformance, and devises and implements corrective action plans (CAP). The audit program currently includes 32 large and medium facilities that are audited on a biennial basis unless an unsatisfactory score is received, in which case a follow-up audit may be conducted the following year.

During FY 2012, a total of 54 small facility assessments were performed as part of the EMS. These assessments are designed to assess facilities and operations that present a lower environmental risk than sites included in the Audit Program, and they utilize protocols designed to assess basic compliance. As with environmental audits, these assessments require the facility Responsible Amtrak Official, or RAO, for the facility to develop a CAP and provide regular progress reports until all findings are closed.
Audit Program Changes

The audit score system was modified for FY 2013 to provide both facility-based and department-based performance evaluation and scores. Upon audit conclusion, department-based scores are issued to each department performing activities at an audited facility. An overall facility score is calculated by adding department-based weighted scores.

The environmental compliance audit score goal for FY 2013 has increased from 82 to 83 as Amtrak continues to strive for continuous improvement and integration of sound environmental principles and practices into our business decisions and operations.

A new Sustainability - Environmental Conservation protocol was developed and will be used to assess each facility’s actions on sustainability initiatives that are part of the Amtrak Strategic Plan, including energy conservation measures, water conservation actions, and conformance with locomotive idling policies.

Environmental Communications

To assist facilities in environmental compliance activities, the following Environmental Alert, Environmental Flash, and Regulatory Update notifications were issued during FY 2012:

- Environmental Alert EMS-EA-018 addressed Storage Tank Overfill Protection & Leak Detection System Calibration Requirements
- Environmental Flash EMS-EF-019 provided information on how to manage used aerosol cans to comply with environmental regulations;
- Environmental Flash EMS-EF-020 reviewed proper management of universal waste lamps;
- Environmental Flash EMS-EF-21 covered changes in the Audit Program appeals process;
- Environmental Flash EMS-EF-22 described the new Sustainability-Environmental Conservation Protocol that will be used during FY 2013 audits;
- Environmental Flash EMS-EF-23 reviewed changes to the Audit Program scoring process to account for department-based scores as well as facility scores.
- Regulatory Update EMS-RU-005 EPA Issues 2012 General Permit for Stormwater Discharges from Construction Activities. This permit replaces the permit issued in 2008
Energy Reduction Measures

One of the five strategic goals, as outlined in the Amtrak Strategic Plan, is to “Contribute to the nation’s environmental health by attracting automobile and air travelers to trains, while improving Amtrak’s efficiency and reducing transportation-related carbon emissions and fossil fuel consumption.” In order to achieve this goal, Amtrak is focusing on reducing consumption of electricity, natural gas, and diesel fuel in order to increase environmental sustainability. In FY 2012, Amtrak accomplished the following:

- Decreased electricity usage by 3.7% in Fiscal Year (FY) 2012 compared to baseline usage in FY 2011.
- Decreased natural gas usage by 42% in FY 2012 compared to baseline usage in FY 2010.
- Received a $580,000 rebate from the State of Illinois for natural gas reduction.
- Performed five compressed air audits, identified and repaired 200 leaks, and eliminated one million kWh of wasted energy due to improperly sized compressors and air dryers.
- Developed and distributed utilities reduction guidelines to assist facility managers in reducing energy.
- Installed new ground power stations at St. Louis; working toward installation at Newport News and Milwaukee.
- Initiated a Sustainability-Environmental Conservation module within the Environmental Compliance Audit Program.

For FY 2013, Amtrak plans to replace an additional 3,000 light fixtures, with a projected reduction of five million kWh and savings of $500,000 annually, and will perform three additional compressed air audits.

Fuel Conservation

Amtrak Transportation continues to execute strategies that deliver positive results in terms of energy efficiency and fuel conservation. During 2012, Amtrak promoted improved train handling techniques to reduce energy consumption in diesel- and electric-powered locomotives during engineer training and re-certification classes, with an emphasis on reducing power braking.
**Fuel Conservation, continued**

As part of the goal to reduce fuel consumption, Amtrak is increasing the amount of ground power circuitry available at train layover facilities, including those in Sacramento, St. Louis, Newport News, Albany and Eugene. At layover locations, locomotives and passenger cars are inspected, serviced, and cleaned so trains can be prepared for their next trip. For much of this work, the train must have electrical power to provide lighting and heat or air conditioning, also referred to as “hotel power”, for the workers. If the train has food service, electricity is also needed to maintain refrigeration. Where ground power is unavailable, the diesel locomotive is kept running to generate all the hotel power required by the train. Using a ground power connection to provide electricity allows the diesel locomotive to be shut down, as long as air temperatures are above 40°F.

Operating practices to increase energy efficiency and reduce emissions include shutting down all diesel locomotives when they will be out of service for an hour or more and the temperature is above 40°F.

**Recycling**

As in previous years, Amtrak mechanical and engineering facilities recycled many industrial materials that are generated through train and track repair and routine maintenance. These include steel parts such as wheels and axles, scrap steel, other metals (such as brass and aluminum), and other materials generated from train repairs, such as polycarbonate windows, mattress foam, and textiles. In the past year, the Wilmington Maintenance Facility began sending wood pallets that are damaged to a local composting facility. Amtrak offices, stations, crew bases, shops and maintenance facilities also recycle non-industrial materials including paper, cardboard and containers of plastic, glass and aluminum. Additionally, newspapers, magazines and beverage containers are collected from trains for recycling at designated stops and turnaround points.

<table>
<thead>
<tr>
<th>Recycled Materials 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industrial Materials</strong></td>
</tr>
<tr>
<td>Steel Parts and Equipment</td>
</tr>
<tr>
<td>Scrap Metal / Steel</td>
</tr>
<tr>
<td>Cable / Wire</td>
</tr>
<tr>
<td>Other metals (incl. copper, brass, aluminum)</td>
</tr>
<tr>
<td>Batteries (lead-acid)</td>
</tr>
<tr>
<td>Mattress Foam</td>
</tr>
<tr>
<td>Windows</td>
</tr>
<tr>
<td>Plastic Drums</td>
</tr>
<tr>
<td>Wood Scrap / Pallets</td>
</tr>
<tr>
<td>Used Oil</td>
</tr>
<tr>
<td><strong>Non-Industrial Materials</strong></td>
</tr>
<tr>
<td>Commingled recycling*</td>
</tr>
<tr>
<td>Mixed paper</td>
</tr>
<tr>
<td>Office paper**</td>
</tr>
<tr>
<td>Cardboard</td>
</tr>
</tbody>
</table>

*Includes commingled plastic, aluminum and glass beverage containers and mixed paper and cardboard collected at Amtrak facilities, and materials from the on-board recycling program.

**In 2012, additional sources of office paper were tracked, including the reprographics center in Washington, D.C.
Climate Initiatives

Amtrak joined The Climate Registry (TCR) in 2009 and committed to produce a comprehensive Greenhouse Gas (GHG) Inventory for all operations on an annual basis. Once the inventory is complete, verification by a third party is required before the data can be made available to the public. Successful completion of the inventory and verification process for both the 2010 and 2011 inventories earned Amtrak Climate Registered™ status in 2011 and 2012. Using data from the 2011 GHG Inventory, Amtrak has established an annual emissions reduction goal of 1% per year for the next five years measured in metric tons of GHG per million seat miles and metric tons of GHG per million passenger miles.

Amtrak has achieved a steadily increasing score from Climate Counts over the past three years. Climate Counts is a non-profit organization which provides an independent and verifiable assessment of a company’s commitment to reduce its impact on the environment and climate change. The group uses 22 specific criteria to produce a scorecard to rate companies on how they measure their carbon footprint, reduce their impact on climate change, support effective climate legislation, and publicly disclose their climate actions in a clear and comprehensive manner. According to the most recent Climate Counts scorecard, Amtrak is making significant progress in reducing fuel use through initiatives such as implementing anti-idling practices for locomotives and improved engineer training for more fuel-efficient locomotive operations.

Since 2008, Amtrak has offered passengers the opportunity to purchase carbon offsets from Carbonfund.org, a not-for-profit climate solutions organization enabling individuals and businesses to reduce their climate impact. Carbonfund.org supports innovative renewable energy, energy efficiency and forestry projects globally that reduce carbon emissions. Amtrak passengers have the opportunity to direct their donated funds to such areas as certified sustainable reforestation and alternative energy projects. In fiscal year 2012, Amtrak passengers offset more than four million passenger miles of their travel through Carbonfund.org. Passengers had positive comments on the ability to offset their carbon emissions through the Amtrak partnership with Carbonfund.org:

“Taking the Amtrak train home to Texas and want to offset my carbon footprint for my grandkids.”

“We all need to take responsibility for our use of our planet’s resources.”

“It’s a great way for me to feel like I’m doing something progressive and positive for the environment.”
**Departments Reduce Paper Use**

Amtrak departments are improving business processes in ways that support the goal of environmental stewardship as well as reducing costs. The Accounts Payable group now offers vendors and customers the option to send invoices via e-mail or fax rather than mailing a paper copy. The Payroll department ended the printing and mailing of direct deposit statements to non-agreement employees. Instead, employees have 24/7 web-based secure access to electronic copies of their direct deposit statements. The eTicketing program largely replaces paper-based ticketing processes with electronic ticketing, thereby allowing customers to print tickets at home or present their eTicket using a smartphone or tablet. These initiatives have reduced Amtrak paper use and its environmental impact, as well as reducing processing, printing and mailing costs.

**Waste Management**

A major initiative in 2012 was to contract with a national firm to manage, report and optimize waste and recycling expenses for all waste accounts. All bills will be captured electronically and audited to identify and correct errors, and then analyzed to identify savings opportunities, such as right-sizing services. This will help to develop consistency of services and will make it easier to track and report on waste and recycling.

**2012 Environmental Incidents**

In 2012, Amtrak recorded a total of 56 environmental incidents involving a spill that required corrective action. Of these, 23 were reported to federal, state or local environmental agencies based on those agencies’ requirements. A total of 39 spills occurred at fixed facilities (e.g. maintenance shops, stations or maintenance of way bases), whereas 17 occurred along the railroad right-of-way.

Of the 56 incidents, there were 41 spills of petroleum products; five spills of non-petroleum oils; and 10 spills involving non-oily materials such as acidic and caustic cleaners, industrial wastewater, sewage, and battery acid.

A breakdown of the types of spills recorded in 2012 is shown in the chart below. Similar to previous years, the majority of spills involved petroleum products (73 percent).

The majority of spills that occurred in 2012 were small spills of less than 25 gallons (63 percent).

To minimize the potential for environmental impacts from spills at facilities and along the right-of-way, Amtrak maintains standard operating procedures for fueling and a system of inspections of vendor fueling operations. In addition, spill prevention and response training is provided to employees who handle oil and other environmentally hazardous materials to ensure that employees take preventive measures and are able to respond quickly to spills that do occur. In 2012, updated training programs for Spill Prevention Control & Countermeasures, Stormwater Pollution Prevention, and Response to Non-Emergency Hazardous Materials Spills were rolled out across the country.
There were no spills greater than 1000 gallons in 2012.
Strategic Fleet Management

The Amtrak fleet of locomotives and passenger rail cars is the center of the company’s ability to deliver competitive intercity rail transportation service. The fleet affects customer perception, product reliability, and the costs of maintenance and service delivery.

In March 2012 Amtrak issued an updated Fleet Strategy. The plan provides a flexible and adaptable approach to fleet management including the replacement of aging equipment and procurement of additional fleet units to meet the projected demand for intercity train service. The plan is designed to shape the fleet so that it delivers the services customers want, meets the strategic requirements of the business regarding sustainability, enhances the product offered to customers and identifies the funding requirements to meet these goals.

Amtrak revised the projections from the 2011 report to expedite equipment acquisitions for more timely replacement of the fleet. In 2012 two major contracts were awarded for new equipment:

- Siemens Transportation was awarded a contract for 70 new electric locomotives. These Amtrak Cities Sprinter ACS-64 locomotives will eventually replace all of the electric locomotives in service on the Northeast Corridor (NEC). Eight of the new locomotives are scheduled to be delivered in 2013, 27 in 2014 and 35 in 2015. They will replace locomotives that have been in service between 20 and 30 years with an average mileage of 3.5 million miles traveled. The new locomotives are designed to send a maximum of five megawatts (MW) of power back to the catenary (overhead electric wire), as compared to the current regeneration of three MW maximum during braking. Five MW regeneration eliminates the need for dynamic brake grids on a locomotive, which produce heat, and allows two additional MW to be sent to the catenary for use by other locomotives operating on the NEC. This process ultimately reduces the overall demand for electricity.

- CAF USA was awarded a contract for 130 Long Distance Single level (LDSL) cars. Delivery is expected to begin September 2013 with the majority of the new cars being placed in service throughout 2014. The new cars will replace the single-level Heritage cars currently in use and will bolster capacity on the single-level long distance fleet.

MOBILITY AND CONNECTIVITY

Accessible Stations Development

Amtrak progressed with work on the Accessible Stations Development Program to bring the stations Amtrak serves into compliance with the Americans with Disabilities Act (ADA). In 2012, 20 stations were completed in California. Station improvements include platform renovations, upgraded or replaced elevators, escalators and stairs to make stations more easily accessible for people with disabilities. In addition, passengers with disabilities now have the ability to both apply for a 15% discount with online ticket purchases and to reserve accessible space on-line. Previously, passengers were only able to do this either by phone or in person. The recorded number of passengers with disabilities who rode Amtrak rose by 16.8% in fiscal year 2012 from a year earlier.

Hudson Line

On December 1, 2012 a long-term lease agreement between Amtrak and CSX took effect. The agreement gives full responsibility to Amtrak for operating, maintaining, and providing capital improvements on the Hudson Line between Poughkeepsie, NY and Schenectady, NY. The agreement sets the stage for New York State Department of Transportation (NYSDOT) Empire Corridor Capacity Improvements, which are part of the NYSDOT High Speed Intercity Passenger Rail Program. The agreement will also ensure passenger rail service will have scheduling priority. This was advanced by the Federal Railroad Administration (FRA) award of American Recovery and Reinvestment Act (ARRA) funding for high speed rail (HSR) to NYSDOT.

While the lease negotiations were in process, work with NYSDOT and FRA was underway on the design for four significant rail improvement projects. The combined projects will reduce congestion, reduce travel times, and improve reliability for both passenger and freight travel along the line. The projects are:

- **Albany Double Track:** Construction of an additional track between Rensselaer and Schenectady to reduce congestion. Seventeen miles of new track will be built between the two cities. With the existing single track, a train must stop and wait for a train traveling in the opposite direction to pass. The second track will eliminate these stops and double the capacity between the two cities.

- **Rensselaer Station Capacity Improvements:** With only three tracks at the station, trains often wait outside the station for as long as 20 minutes for a platform to become available. Construction of a fourth track at the station will reduce congestion and delays for passengers.

- **Signal Line Improvements:** This project will replace more than 60 miles of obsolete signal wires from Albany south to improve the reliability of rail service. The signal wires are the source of frequent outages along the Hudson line, especially during inclement weather. Trains are often slowed to 15 mph on a track capable of supporting 110 mph train service. Aboveground lines will be replaced and buried underground.

- **Grade Level Crossing Improvements:** This project will improve safety of motor vehicles and trains, and includes improvements at 13 at-grade rail crossings along the Hudson Line. The improvements include installing new LED lighting, electronic flashers and bells, speed predictors, new gates and other crossing improvements. Work at the Ferry Road
**State-Supported Services**

One of the four new business lines within Amtrak is State-Supported Services. Amtrak partners with 15 states to bring service to their communities, and these services comprise more than half of Amtrak’s departures. Total state-supported revenues in fiscal year 2011 from California, Illinois, Maine, Michigan, Missouri, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Texas, Vermont, Virginia, Washington, and Wisconsin, and totaled $191.1 million. These services continue to grow. As an example, the two-year old Lynchburg, VA service has produced steady ridership and revenue growth with an increase of 14% in ridership and revenue increases of 16% over the last fiscal year.

More information about Amtrak’s State Supported Services can be found at www.amtrak.co.

*Pictured below: the new 500,000-gallon capacity stormwater detention pond at the Amtrak Beech Grove, IN facility.*

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**FINANCIAL AND ORGANIZATIONAL EXCELLENCE**

**Environmental Capital Projects and Remediation**

Amtrak maintains a program to remediate historically contaminated properties. By removing contaminants from soil, sediment and groundwater, these areas can be restored for future reuse for the benefit of the company and surrounding communities.

In addition, Amtrak facilities employ best management practices and facility upgrades to prevent contamination of groundwater or stormwater runoff that flows to nearby streams and waterways. For example, in 2012, the Amtrak facility in Chicago, Illinois replaced underground soap tanks with aboveground tanks to minimize the potential for groundwater pollution.

**Stormwater Sewer Separation in Beech Grove, IN**

A stormwater sewer separation project was completed at the Amtrak Beech Grove, Indiana facility in 2012. Prior to project completion, both stormwater and industrial wastewater flows were discharged to the local sewage treatment plant. The project was designed to separate these flows so that only industrial wastewater is directed to the local sewage treatment plant, reducing the burden on the city’s treatment resources. The project included relining existing sewer pipes to eliminate ground water infiltration, installing five new stormwater sewer lines, and building a 500,000 gallon detention pond to collect stormwater for inspection prior to discharge into a local creek.

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<table>
<thead>
<tr>
<th>Amtrak Environmental Capital Projects 2012</th>
<th>FY 2012 Capital Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilmington Maintenance Facility Remediation</td>
<td>$494,205</td>
</tr>
<tr>
<td>Cedar Hill Maintenance of Way Base Remediation</td>
<td>$28,323</td>
</tr>
<tr>
<td>Sunnyside Yard Remediation</td>
<td>$820,131</td>
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<tr>
<td>Asbestos and Lead Paint Abatement (multiple facilities)</td>
<td>$741,136</td>
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<tr>
<td>Beech Grove Wastewater Treatment System Replacement</td>
<td>$749,527</td>
</tr>
<tr>
<td>Pollution Prevention Projects (multiple facilities)</td>
<td>$21,260</td>
</tr>
</tbody>
</table>
Superstorm Sandy Preparation
and Recovery Planning

Superstorm Sandy was an unprecedented event in the Northeast. The 900-mile wide storm caused widespread damage from Florida to Maine across to Michigan and Wisconsin, including over 500 miles of Amtrak-owned and -maintained right-of-way and infrastructure. Sandy was the most destructive storm of the 2012 season and the second costliest hurricane in United States history. It cost Amtrak more than $20 million in damage and repairs to the Northeast Corridor.

The experience of Superstorm Sandy demonstrates how important preparation, teamwork and partnerships are to recovery efforts. It also shows how important it is to invest in infrastructure to provide the transportation system with resiliency and redundancy.

The story of Amtrak’s quick service restoration from Superstorm Sandy begins with the pre-storm preparation efforts made by the company, including the decision to suspend service along the Northeast Corridor on October 29, 2012 in advance of the storm. Amtrak Engineering personnel began planning and preparation efforts four days prior to Sandy hitting the Northeast. Preparations were incremental and included various measures: fueling vehicles and equipment; staging equipment and maintenance materials in strategic areas to address electric traction and signal problems; inspecting flood prone areas and removing critical equipment from low-lying points; stationing repair crews; manning communication centers; and conducting inspection patrols during and after the storm to identify damage and assess risk of further damage. The preparation and decision to suspend service was crucial and allowed Amtrak to park equipment in the yards, reducing the risk of stranded trains and passengers.

Unprecedented Damage

Wind and water damage from the storm was unprecedented, causing flooding of 100-year old tunnels that had never flooded before. Two of four East River Tunnels from New York City were flooded with more than seven million gallons of water. The Long Island Railroad West Side Yard flooded. These flood waters flowed toward Penn Station NY and into the North River Tunnels that cross under the Hudson River. The two North River Tunnels were flooded with three million gallons of water. Salt water caused extensive damage to signal systems, and sump pumps were destroyed. The Kearny, NJ Substation was also flooded, and water infiltration caused electrical shorts in signal systems along the corridor. High winds blew debris into wires and ripped down lines which caused damage to electrical and signal systems.

Pictures courtesy of Michael Traina, Electric Traction, New York.
Substation 41, located in Kearny, NJ, was flooded with six feet of water.
A Quick Return to Service

Amtrak re-opened all four tunnels for service by November 12, 2012. The successful recovery and return of service was in large part due to crews working around the clock to make repairs to tracks, tunnel signals and electrical systems. Assistance from freight and state railroad partners helped speed the recovery. Two examples: CSX helped get ballast from Albany delivered to Trenton for track repairs and New Jersey Transit (NJT) loaned their “Aqua Train” to help clear the right-of-way. Long Island Railroad (LIRR), Metro North, and Norfolk Southern also provided support. Amtrak lent assistance to LIRR, NJT and Metro North in their recovery efforts.

Investment in Infrastructure:
Proven Results

In a hearing in front of a U.S. Senate committee Amtrak President and CEO Joseph Boardman expressed the importance of strengthening rail capacity and resiliency in the New York region in order to create “a better ability to resist damage, recover from an event and return the rail system to service” following major disasters. Mr. Boardman highlighted recent capital investments which have improved resiliency in the system resulting in a faster recovery. Some of these investments include:

- Fire and life safety investments made to the tunnel system provided better access points for quick damage assessment, pumps were connected to a new standpipe system to remove flood waters, and a new ventilation system assisted in faster drying out of the tunnels.
- Pruning and removing trees from the right-of-way prevented many limbs from being blown into the catenary system.
- Cleaning and repairing culverts to improve drainage and prevent water accumulation to reduce track washout.

Amtrak Aids Communities In Sandy Recovery Efforts

Amtrak employees pulled together to provide aid to those affected by Hurricane Sandy. The Amtrak Employee Relief Fund, an employee-to-employee donation fund, was created for employees affected by the storm. Employees from across the country made contributions to the fund.

Amtrak provided free travel on the Northeast Corridor from Washington, DC to Boston, MA to uniformed first responders including police, fire, and emergency medical providers, National Guard, Federal Emergency Management Administration, Red Cross and other personnel directly involved in recovery efforts.

Amtrak also brought a railcar filled with donations of cleaning supplies, diapers, blackest, batteries and other critical items from the community of Slidell, Louisiana. Called the “Train of Hope” the community of Slidell and St. Tammany Parish want to “pay it forward” to give help and hope to those affected by Hurricane Sandy.
Walking and Health Programs

The Employee Benefits Group within the Human Capital department at Amtrak provided a number of wellness programs to Amtrak employees in 2012. Highlights of these programs are noted below.

Walking contest
Amtrak had over 600 employees across the country participate in a "Stay on Track ...Keep Walking" competition. Essentially, participants accepted a walking challenge which included wearing a pedometer and logging their daily steps. The goal was to get employees walking at least 10,000 steps a day (roughly five miles). The contest offered a prize to the team and individual with the highest step count. The purpose of the competition was to give employees a fun and easy way to improve their health and fitness. The competition lasted six weeks and was very successful as registration exceeded expectations. The program is part of a larger company-wide effort to promote health and wellness.

Weight Watchers at Work
The Employee Benefits group provided a Weight Watchers at Work program which had an enthusiastic response from employees. The leader of the program went to different work sites to provide encouragement for losing weight, exercising, and general mental health to our employees. The program spanned 17 weeks with one 45-minute meeting per week per location.

Flu Shots
Amtrak offered flu shots to employees within the Amtrak system free of charge. Flu shots were provided in more than 20 locations. Those who were unable to attend the scheduled sessions were given vouchers for local providers. Over 2300 participants received a flu shot.

Wellness - Biometrics
The Employee Benefits group sponsored a pilot program for biometric testing at five test locations within the Amtrak system. Employees at the test sites volunteered to go through a health-risk assessment, including a blood test, to identify health risks and learn ways to improve their health. There were over 600 participants in the program.
CUSTOMER FOCUS

Waste Reduction and On-Board Recycling

To improve on-board recycling services, the Environmental group worked with the Mechanical Department on a plan to design, build and install new recycling containers in passenger cars. The containers are to be installed during scheduled overhauls. Initial design work was completed in 2012, and in 2013 Amtrak will focus on completing the container design and specifications for the long-distance Superliner cars. Installation is expected to begin by December 2013 and to be completed for all the Superliner cars during the four-year overhaul cycle. Adding new built-in recycling capacity is also expected to eliminate the need for supplemental trash containers currently in use.

Amtrak added platform-level recycling containers at 30th Street Station, Philadelphia, to make it easier for passengers to deposit their recyclables as soon as they exit the train. We continue to explore the possibility of expanding platform recycling at other stations while addressing issues of security and weather conditions.

eTicketing

Amtrak collaborated with AT&T to launch an eTicketing system to replace the century-old paper-ticket system. The eTicketing system uses an application enabled through AT&T’s Mobile Enterprise Application Platform. Conductors now use a smartphone to validate electronic tickets by scanning bar codes instead of punching and collecting paper tickets for manual accounting. Ticket lift information is synchronized between the Conductor’s smartphone and central systems, allowing for real-time revenue accounting and passenger manifests.

eTickets provide passengers with the convenience of skipping the line at the ticket window and going straight to the gate by printing their tickets beforehand on their home or office printer – or by simply by presenting their eTicket barcode to the Conductor using their smartphone. It also allows passengers to change reservations themselves, even on the way to the station in the taxi. In addition to enhancing the customer’s experience, eTicketing reduces the amount of paper that is printed unnecessarily.
Sustainability in Food and Beverage Services

Food and beverage services are an important component of passenger rail service. Over the past two years, Amtrak’s Food and Beverage Service has looked for opportunities throughout their supply chain to make the service more sustainable and to meet the concerns of customers. They initially focused on items that have an immediate impact because they are purchased in large quantities and used throughout the Amtrak system, such as napkins, trays, and plates. The following changes were put in place:

- All printed materials use soy-based inks and are made of recycled paper from sources certified by the Forest Stewardship Council (FSC)
- Disposable cups are made from 100% biodegradable and renewable, plant-based sources (Greenware)
- Napkins are made from 100% recycled fiber
- Hot beverage sleeves and carryout trays are made from 100% recycled fiber
- Switched to US-based supplier for plates
- In California, switched some plates to plant-based (requested by the state of CA)

The Food and Beverage Service continues to evaluate the packaging used by supply chain partners to make sure it is compatible with Amtrak recycling initiatives. They have also begun to score supply chain partners on their sustainability initiatives as part of the selection process.

SAFETY AND SECURITY

Highlights of the Amtrak Safe-2-Safer Program

In 2012, Amtrak expanded and strengthened the company-wide Safe-2-Safer (S2S) effort that was begun in 2009. Safe-2-Safer is designed to improve safety and security by fostering cooperation and collaboration; strengthening safety leadership; creating robust processes to encourage the active participation of all employees; and integrating the requirements of the Railroad Safety Improvement Act of 2008.

The two main components of Safe-2-Safer are 1) training and coaching of supervisors and managers to become better safety leaders, and 2) implementing the Behavioral Accident Prevention Process (BAPP), a peer-to-peer observation process that provides information and insight into how to prevent accidents and injuries.

In 2012, managers and supervisors participated in development activities that included individualized leadership assessments, safety leadership workshops, and one-on-one coaching sessions. These leaders learned about how to reduce safety risks, communicate more effectively, and create a more collaborative and constructive working environment for their teams.

Since S2S began in 2009, BAPP has been managed at the local and regional level by Steering Committees made up of agreement-covered employees selected by their respective unions. New in 2012, the 28th Steering Committee was formed to implement the BAPP process for headquarters employees not covered by the other regional committees. The headquarters steering team is unique in being composed of both management and agreement-covered employees working together to implement the BAPP process. BAPP involves identification of safe behaviors that prevent the most common injuries,
along with voluntary peer-to-peer observations to encourage use of those behaviors. The BAPP process also helps to identify barriers that prevent people from working safely.

**Environment and Sustainability Presentations and Papers**

The Environmental Group in 2012 delivered a number of presentations and a journal article on sustainability topics. In July, Celia Ann Pfleckl, Senior Environmental Engineer, delivered a presentation entitled “Tracking and Evaluating Greenhouse Gas Emissions” at the 8th World Congress on High Speed Rail held in Philadelphia, PA. In August, Joanne Maxwell, Director Environmental Management Programs, and Celia Ann Pfleckl delivered a joint presentation entitled “Internal Partnerships for a Sustainability Program at Amtrak” at the American Public Transportation Association’s 2012 Sustainability and Public Transportation Workshop in Philadelphia.

Amtrak environmental professionals delivered three papers at the annual Railroad Environmental Conference held in October at the University of Illinois at Urbana-Champaign:

- Internal Partnerships and the Sustainability Program at Amtrak
- Principled Environmental Messaging
- Amtrak’s GHG Inventory Management Process: Software Development

In September, Celia Ann Pfleckl, Roy Deitchman, and Benjamin Deitchman published a journal article in Environmental Practice titled “Environmental Ethics at Amtrak: From Compliance to Sustainability”. The article focused on ethical concerns in the area of environmental messaging.