

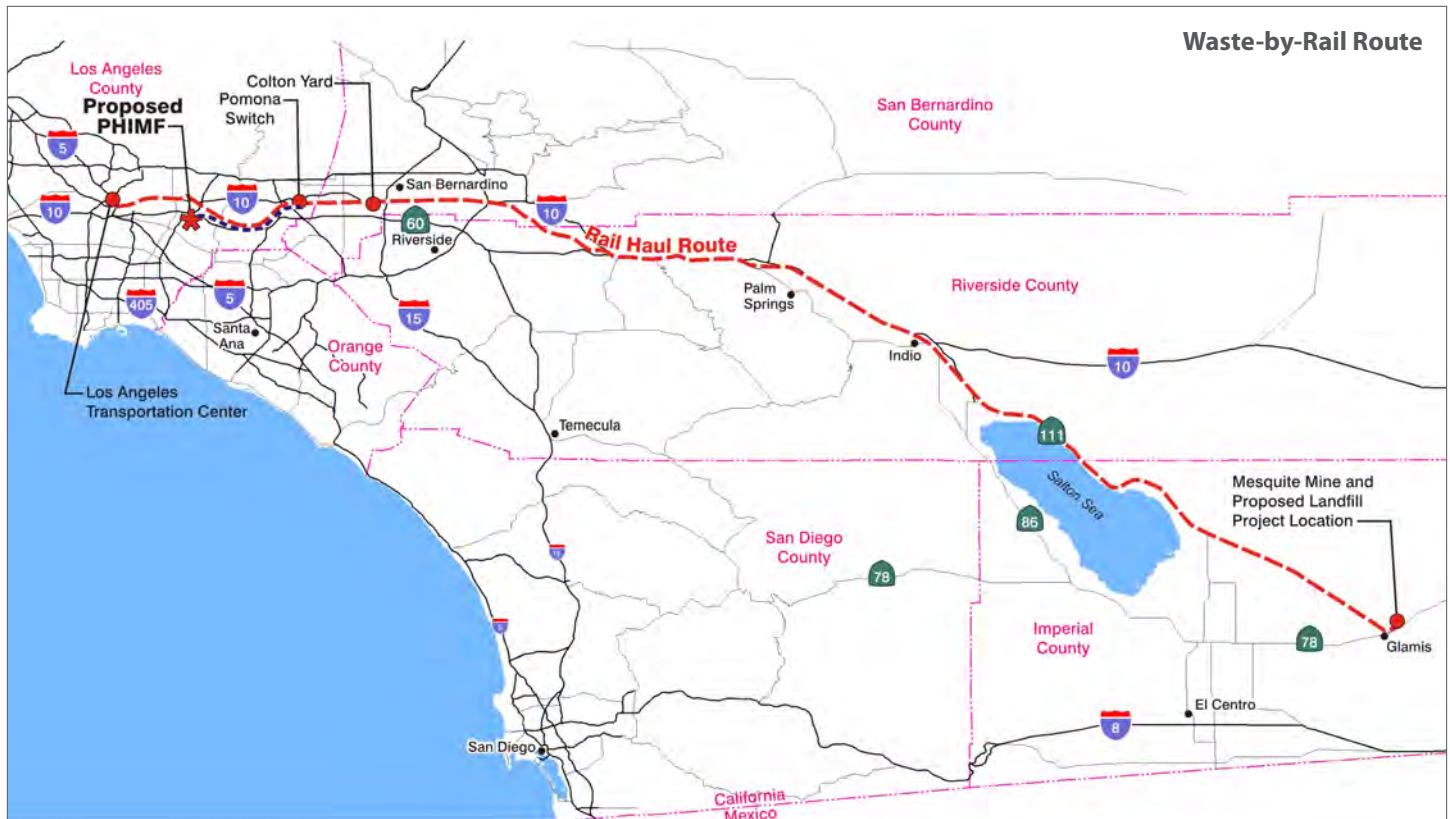
## Waste-by-Rail: Regional Benefits vs. Local Challenges

The problem of municipal waste—and how to dispose of it—is becoming increasingly critical in California. Like many areas in the country, the state is faced with the closure of several of its local landfills over the next decade, but it is clear that new local landfills are no longer an option in areas of increasing urbanization. And community opposition makes local landfill development nearly impossible. Though it is not an optimal solution, there can be environmental advantages to shipping waste to regional landfills in more remote areas if the system is properly devised.

Sanitation District No. 2 of Los Angeles County (LACSD) constructed a precedent-setting project on a 17.2-acre property at Pellissier Place in the City of Industry.<sup>1</sup> The Puente Hills Intermodal Facility (PHIMF) will be an essential component of a fully integrated waste-by-rail system—the first of its kind in the state. The intermodal facility will transfer containers of nonhazardous municipal solid waste from trucks to trains so they can be sent to the Mesquite Regional Landfill

in Imperial County. Garbage trucks bring waste from the community to the Puente Hills Materials Recovery Facility (PHMRF), where recyclable and hazardous materials are separated from the municipal solid waste that goes to the landfill. The municipal solid waste is loaded into rail containers, which are hauled by hostler trucks to the PHIMF—practically next door—where the containers are loaded by crane onto rail cars. The PHIMF will initially receive up to 4,000 tons per day of containerized waste from the PHMRF and ship it on one train daily to the Mesquite Regional Landfill, but it will have the capacity to receive and ship double that amount.

This project is a critical part of a program to replace the dwindling options for local landfills with regional landfills. And though the project's broad-reaching benefits make it worth pursuing, there are local challenges—air quality, noise, and traffic issues—that will affect the surrounding residential communities.



## WASTE-BY-RAIL: REGIONAL BENEFITS VS. LOCAL CHALLENGES

### REGIONAL BENEFITS

One of the regional benefits of the PHIMF will be that it implements the waste-by-rail system before Los Angeles County's landfills reach maximum capacity. In 2008, LACSD projected that local landfill capacity would fall short by about 1,800 tons per day under the best-case scenario and 4,900 tons per day under the worst case after the closure of the Puente Hills Landfill in October 2013. Although there is more capacity in landfills than projected due to the recession, Los Angeles County's population is projected to increase by over 600,000 by 2020.<sup>2</sup> With the economy and population on the upswing, it is only a matter of time before other landfills reach their capacity. The construction of the system is already complete (anticipating a 2012 opening date), so it can begin operating whenever it is finally needed.

Another benefit of the PHIMF and waste-by-rail system is that they will cause substantially less regional air contamination than simply trucking the refuse to the Mesquite Regional Landfill. It would take 182 long-haul trucks to carry the 4,000 tons of containerized solid waste that can be handled by a single train. That many trucks would emit a much greater amount of air pollutants, including the smog-

producing combination of reactive organic gases and nitrogen oxides. Truck transport would produce almost eight times more reactive organic gases than hauling the waste by rail (442 pounds per day versus 50 ppd) and more than three times the nitrogen oxides (3,769 ppd versus 909 ppd).

### LOCAL IMPACTS

Although this project will be beneficial from a regional standpoint, the construction and operation of the intermodal facility will have impacts on the residential areas surrounding it, most notably for air quality, noise, and traffic.

Four residential neighborhoods are close to the PHIMF site—one only 300 feet away. These neighborhoods face considerable impacts from a large increase in local train traffic in addition to the two round-trips added by the PHIMF. The Union Pacific Railroad plans to expand the intermodal container transfer facility that serves the Port of Los Angeles and the Port of Long Beach, increasing its annual cargo-handling capacity from 725,000 to 1.5 million containers, consequently doubling locomotive activity on regional rail lines.



Proposed Puente Hills Intermodal Facility

# PLACEVIEWS

PlaceWorks | November 2013 / Issue No. 1

Therefore, some of the special design features and mitigation measures that will minimize PHIMF's impact on nearby communities will benefit these neighborhoods when the port facility is expanded.

To reduce the local air contamination and noise produced by operating the PHIMF, conventional switch locomotives will not be used at all. Instead, the switch locomotives at PHIMF will run on either diesel-electric hybrids or generator sets, both of which are quieter, more fuel efficient, and produce lower emissions. Additional measures will include operating no more than two locomotive engines for each train entering and exiting the facility's staging and arrival/departure tracks, and requiring all inbound trains to pull directly into an unoccupied staging track so that idling trains are not adjacent to residential communities.

Additional measures also reduce the emissions from the other equipment used by the PHIMF. Hostler trucks moving containers between the PHMRF and PHIMF must run on liquid natural gas, which has much fewer emissions than diesel. Forklifts will run on propane, which also burns cleaner than diesel, and any equipment that is powered by diesel—cranes, cherry pickers, light towers, etc.—will meet Tier 4 standards, which reduce emissions by 90 percent from the previous standards.

To comply with noise mitigation requirements, the LACSD established a working group of LACSD staff, representatives from each of the two closest and most impacted residential neighborhoods, and a representative from the Los Angeles County Supervisor for that district. Residents from affected communities near the PHIMF had 60 days to review the noise mitigation options and give their comments to the working group. During this time, public workshops were held to explain the mitigation options in detail to residents. The working group reviewed and finalized the proposed mitigation measures. LACSD paid to upgrade windows and doors to provide at least a 25-decibel reduction in sound (45 dB is typically the target goal for indoor noise levels). LACSD also erected temporary sound walls during construction and is building 11-foot permanent sound walls. A "quiet zone"—where the train does not sound its horn at crossings—will further reduce noise levels. The quiet zone will begin operations when the city has finished making required improvements at the crossings.

Mitigation to reduce traffic impacts includes upgrading gates at the local railway crossing. A new four-quadrant gate system at a busy at-grade crossing will prevent vehicles from driving around the gates and onto the tracks before a train arrives, reducing the risk of accidents and subsequent delays, and adding an extra safety feature in the quiet zone. Another mitigation measure and innovative feature is placing electronic signs at nearby intersections to warn motorists about impending delays and their likely duration, and to recommend

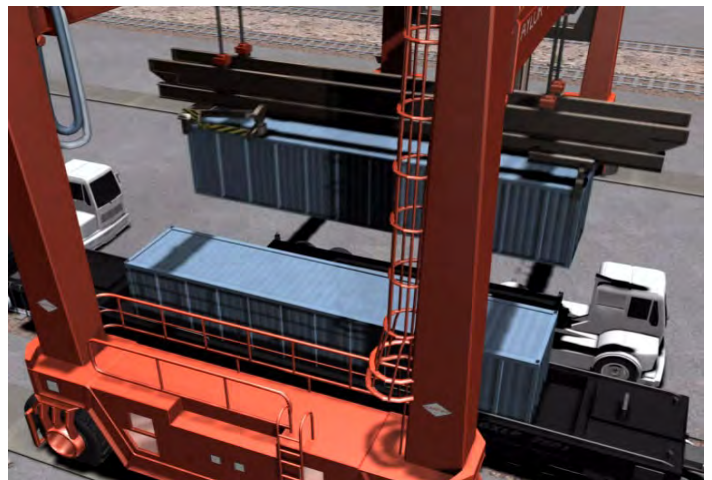
detours so drivers can use alternate routes before getting stuck at a busy crossing. In addition, six traffic signals on alternate route streets in the project vicinity will be linked and green lights coordinated to allow traffic to flow at a steady pace.



*Trash is sorted at the PHMRF and loaded into containers...*



*...which are hauled by low-polluting, LNG-powered hostler trucks to the PHIMF...*



*...where rubber-tired gantry cranes load the containers onto rail cars.*



3 MACARTHUR PLACE, SUITE 1100  
SANTA ANA, CA 92707

RETURN SERVICE REQUESTED

NOVEMBER 2013 / ISSUE NO.1

**WASTE-BY-RAIL:  
REGIONAL BENEFITS VS. LOCAL CHALLENGES**

Mitigating the local impacts presents a challenge, but the PHIMF benefits Los Angeles County as a whole because a waste-by-rail system to remote landfills is critical to meet this region's needs for refuse disposal. As jurisdictions are increasingly restricted from building new landfills in incompatible community settings, this innovative system can be a model for counties state- and nationwide.

## NOTES

1. The Planning Center|DC&E prepared the EIR for the PHIMF project.
2. State of California, Department of Finance, "Report P-1 (County): State and County Total Population Projections, 2010–2060," Sacramento, California, January 2013.

PLACEVIEWS is published by PlaceWorks as a service to our clients and friends. This material is provided for general information purposes only and does not constitute legal advice. We are a private firm providing planning and environmental consulting services for both governmental agencies and the private sector. This newsletter and others are available on our Web site at [placeworks.com](http://placeworks.com).

© November 2013 by PlaceWorks. All rights reserved.

Questions related to this PLACEVIEWS may be directed to:  
Dwayne Mears, AICP at 714.966.9220  
[dmears@placeworks.com](mailto:dmears@placeworks.com)

Printed on recycled paper.