

# Railroads and the Marcellus Shale Gas Play



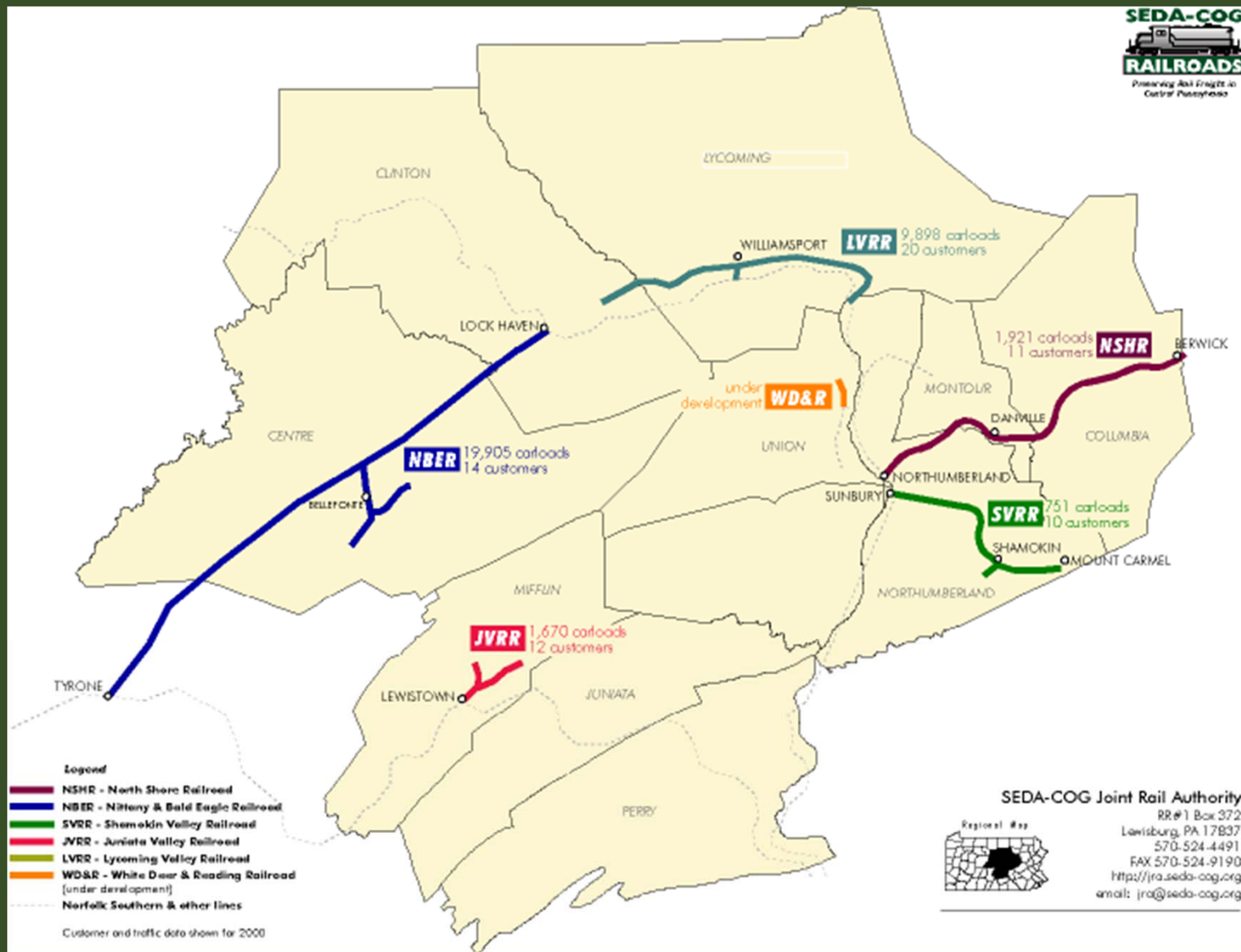
*SEDA-COG Joint Rail Authority  
Lewisburg, PA*

# The SEDA-COG Joint Rail Authority

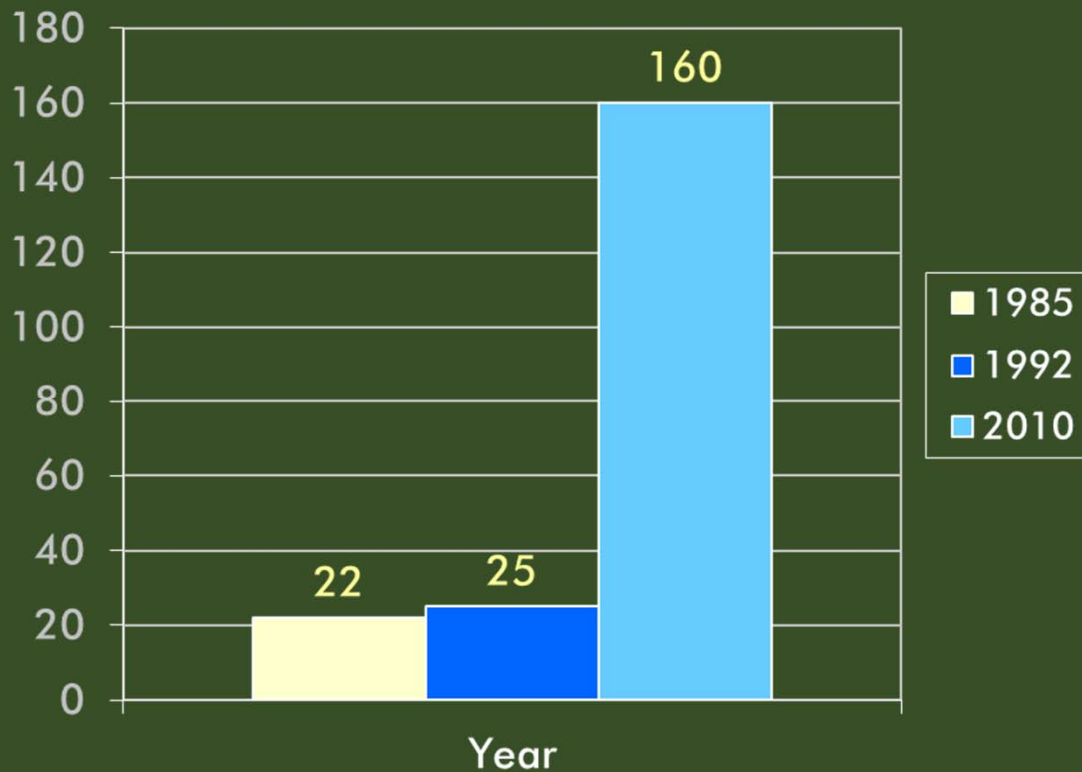


- Since 1983 classic public-private arrangement consisting of 8 counties
- JRA owns the railroad and related property
- Contract private railroad operations:
  - Lycoming Valley
  - North Shore
  - Juniata Valley
  - Nittany & Bald Eagle
  - Shamokin Valley

# JRA System



# Traffic Density 1985-1992-2010



**1986 Traffic:**  
1,900 carloads

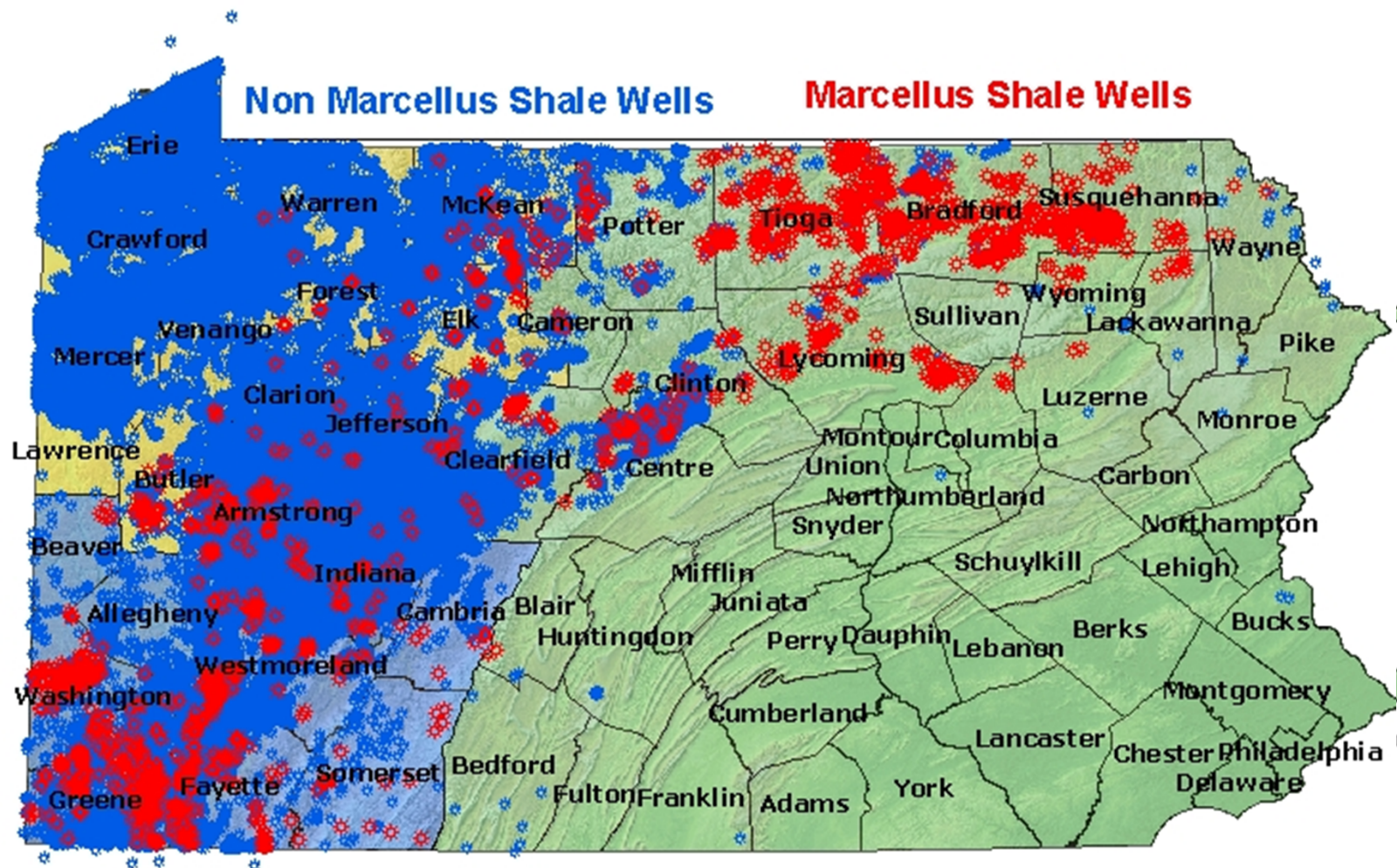
**2010 Traffic:**  
32,000 carloads

Total Jobs Retained 1985 = 3,000

**Current Employment of Our 100 Customers = 9,500+**



## Marcellus Shale Drilling in PA

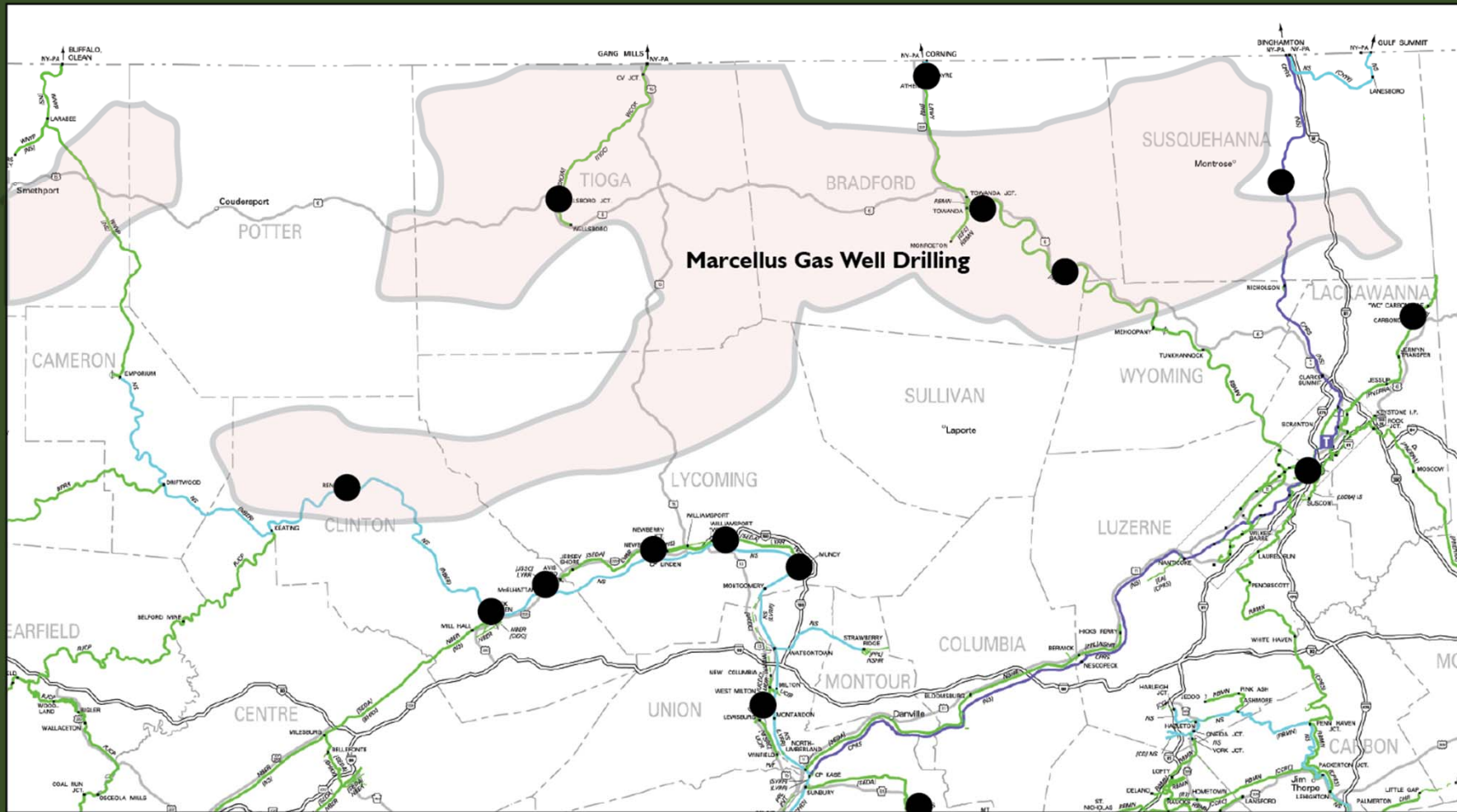


# Rail Role in Marcellus Development



- Commodities handled by rail:
  - Frac Sand
    - "Regular" frac sand
    - Coated resinous sands
    - Ceramic sands
  - Pipe (downhole and gathering)
  - Hydrochloric acid
  - Brine water
  - Cements and related materials
  - Miscellaneous
    - Mats
    - Equipment

# Marcellus Shale Drilling and Rail Facility Locations



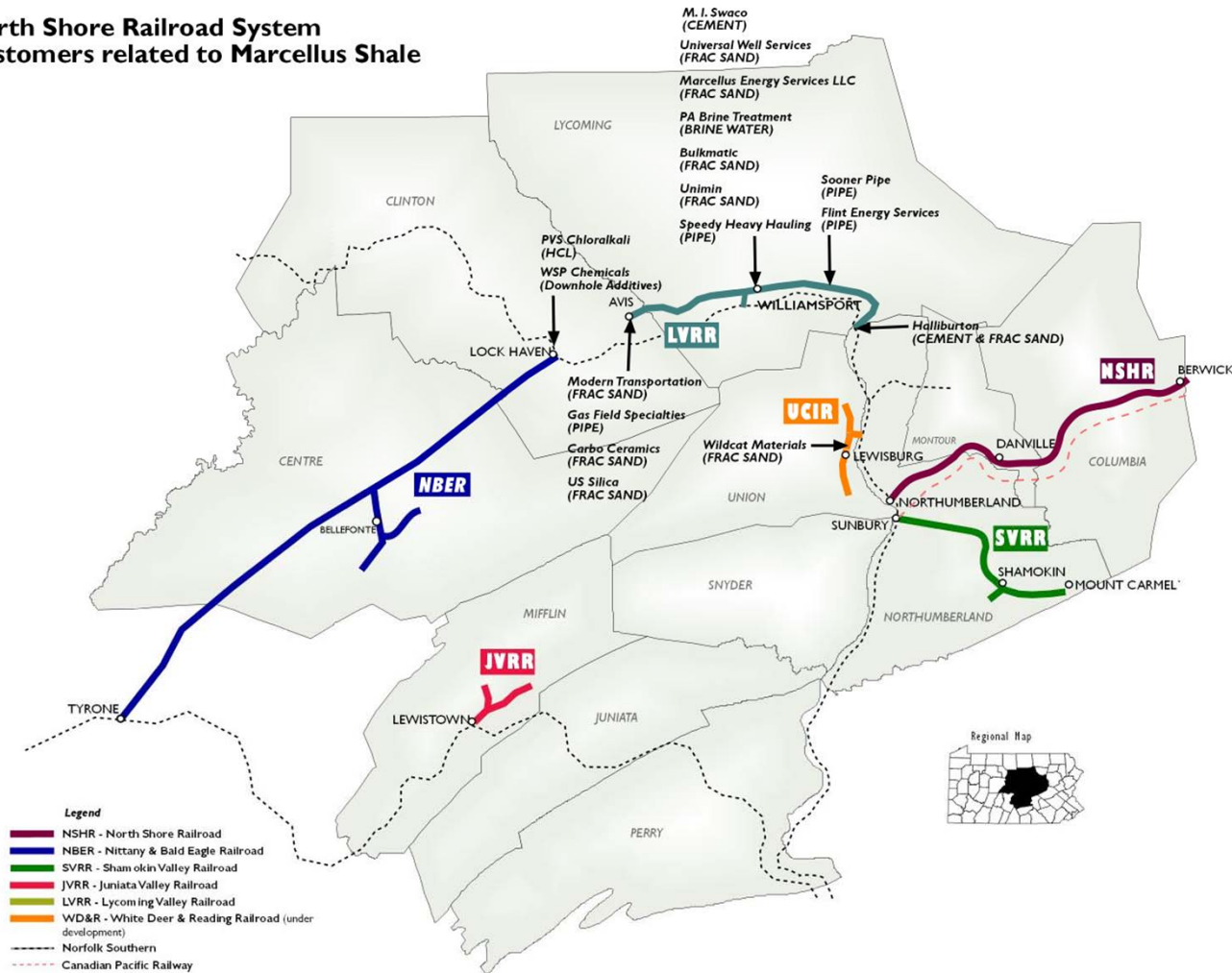
● Locations having railroad facilities handling Marcellus traffic



# Marcellus Shale IMPACTS

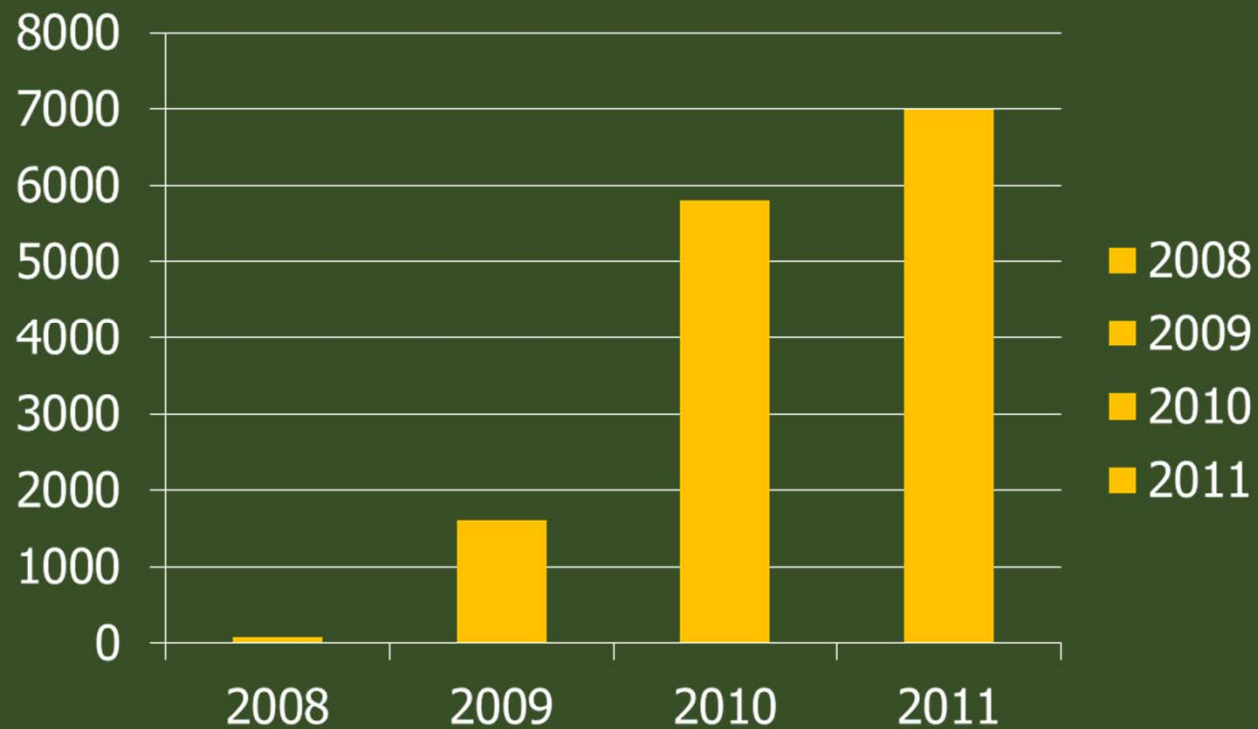


## North Shore Railroad System Customers related to Marcellus Shale

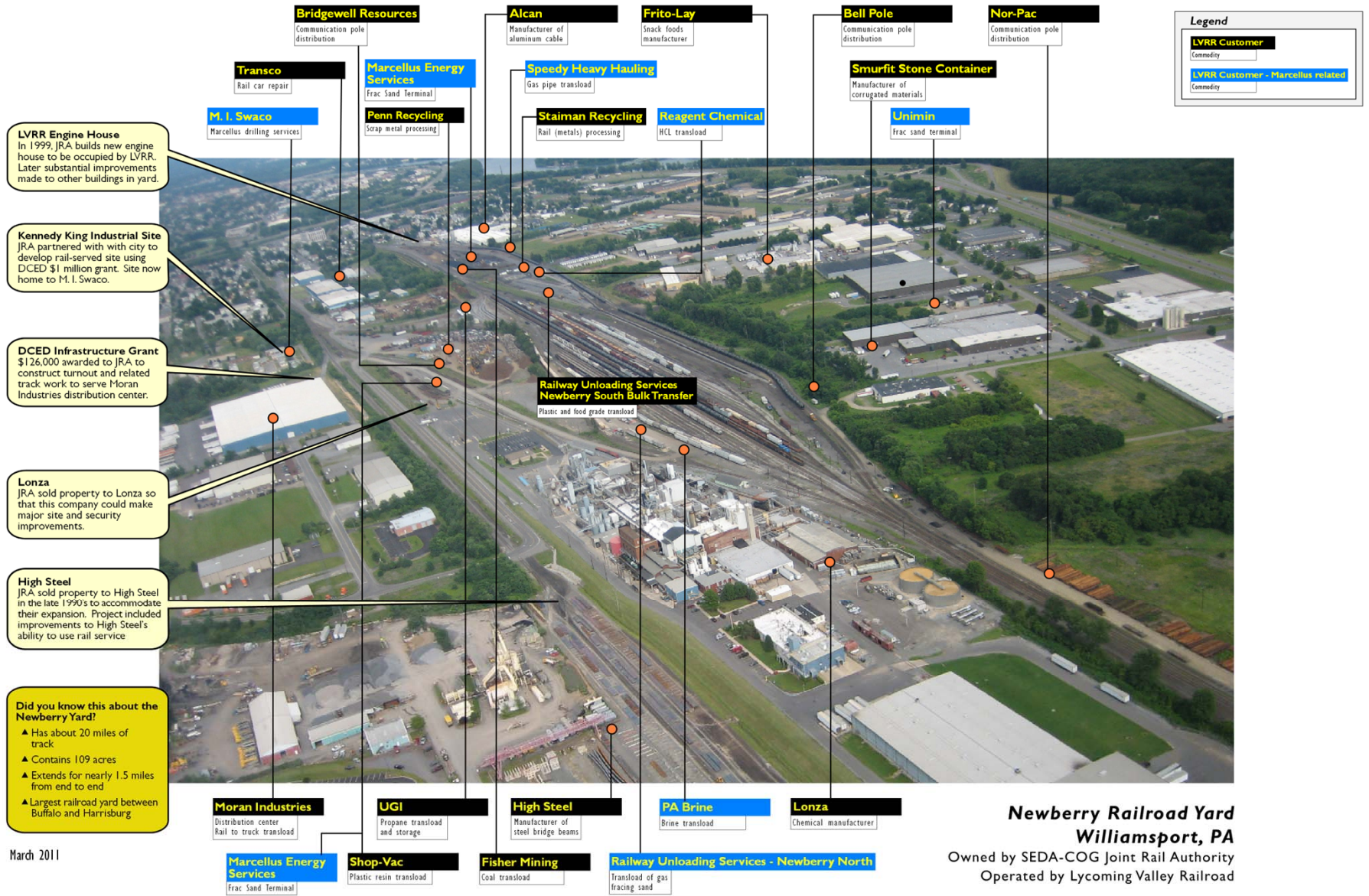


# Lycoming Valley Railroad Gas Related Traffic

LVRR Marcellus Related Traffic



# LVRR-Newberry Yard





# LVRR-Newberry Bulk Transfer Facility



*Transload frac sand rail to truck*

# LVRR - Williamsport M. I. Swaco



*"Mud Plant"*



# LVRR - Williamsport HCL Transload



*Reagent Chemical – Hydrochloric  
Transload under construction*

# Running out of room!



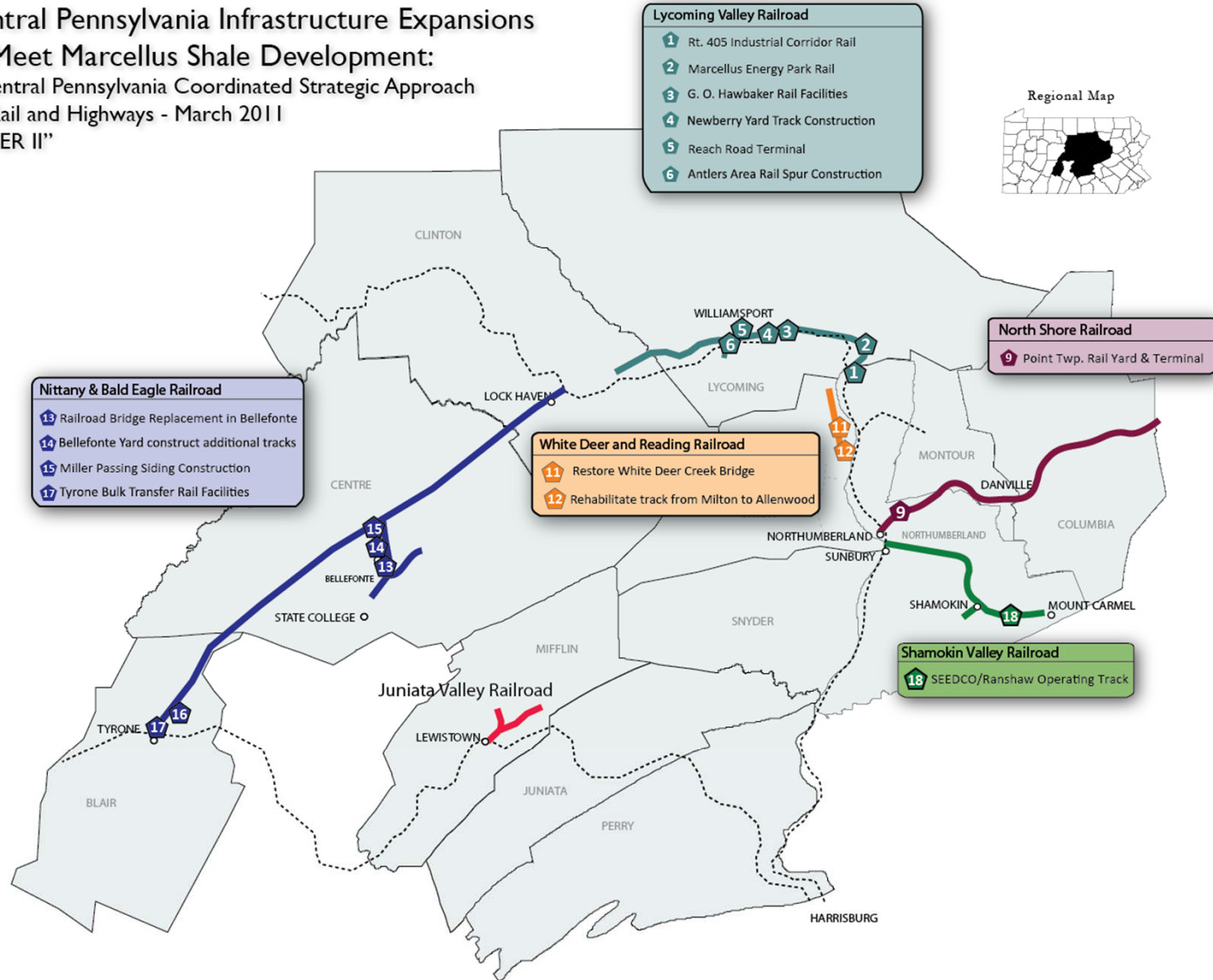
- We are working with the IPC in Williamsport and Mifflin County IDC to identify new sites along the various rail lines.
- Virtually all of Newberry Yard not necessary for operations has been occupied.
- JRA actively looking for additional land adjacent to existing railroad properties

# JRA as Proactive Economic Partner



- TIGER II projects
  - \$10M U. S. DOT grant
  - + \$3.85M PennDOT grant
  - + \$2.2M Private Partners and North Shore RR
  - = 16 Project in Six Counties Totaling \$15.6M

# Central Pennsylvania Infrastructure Expansions to Meet Marcellus Shale Development: A Central Pennsylvania Coordinated Strategic Approach for Rail and Highways - March 2011 "TIGER II"







**Questions?**