



DVRPC Goods Movement Task Force

October 14, 2015

THE ROLE OF THE SHORTLINE FREIGHT RAILROAD IN ECONOMIC DEVELOPMENT



The Discussion and Focus



- We live in a diverse US economy
- infrastructure in place – railroad industry
- global integrated competition
- industry requirements and flexibility
- modal competition & partnership
- government regulations
- looking for the solution!



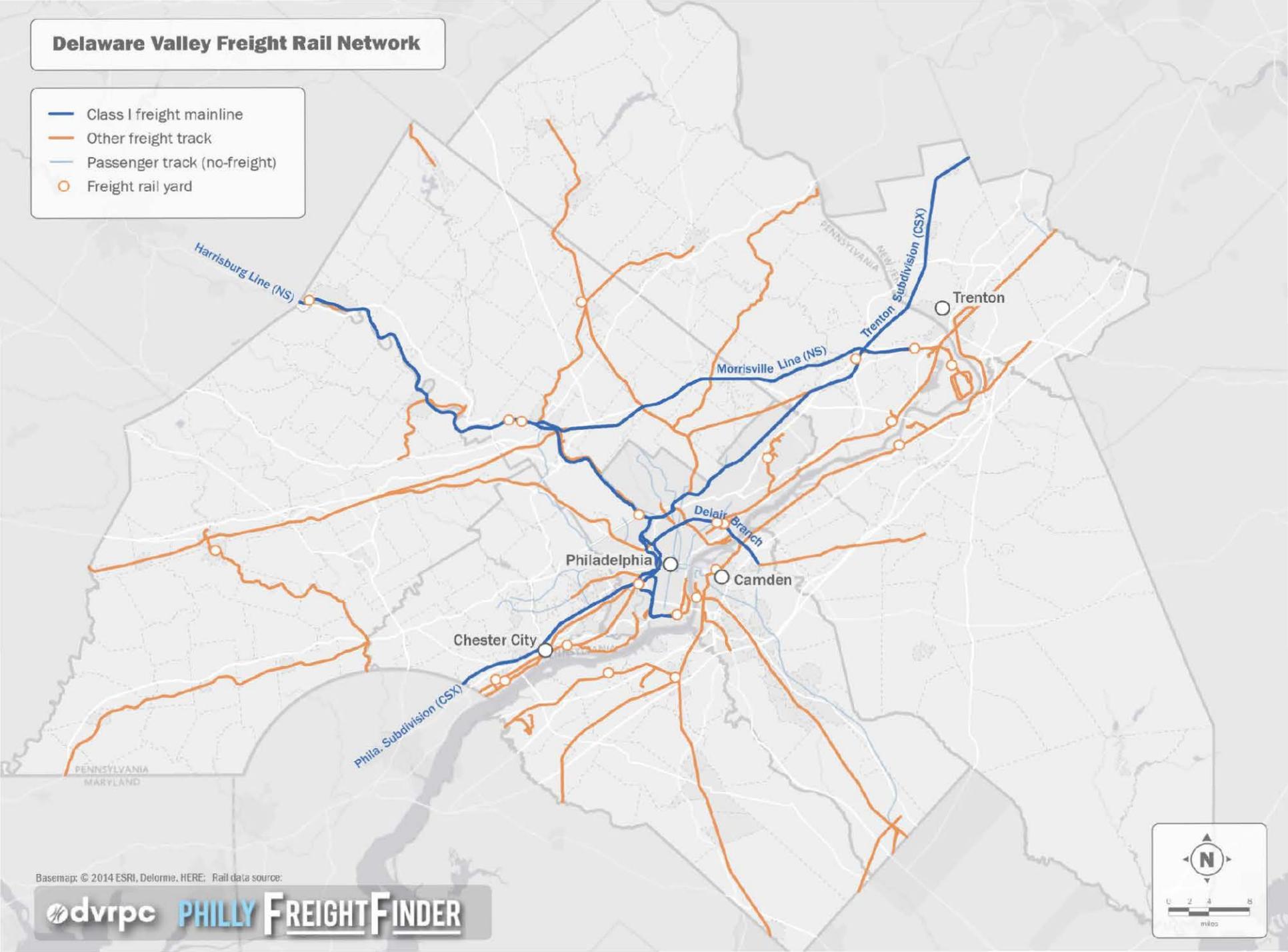
The Railroad Industry



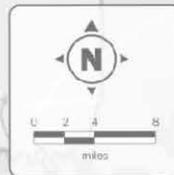
- 8 Class 1 Railroads in North America
- Universally recognized as the best rail freight network in the world
- 140,000 miles of railroad in the Americas
- 574 shortline and regional railroads in North America
- \$29 billion planned capex spend in 2015
- **DVRPC Regional Rail Operations**
 - two class 1 railroads and 12 shortline & regional railroads

Delaware Valley Freight Rail Network

- Class I freight mainline
- Other freight track
- Passenger track (no-freight)
- Freight rail yard



Basemap: © 2014 ESRI, DeLorme, HERE. Rail data source:



We are.....



- ' 24/7 ' On-Demand Switching Services to meet ALL market demands
- Maintenance/repair of all rail infrastructure – YES on 286k and Plate F
- Design, engineering and construction of new rail infrastructure
- No charges for re-spotting of rail cars – empty or loaded
- Lowest carload demurrage rates in the industry
- Our business development efforts are essential to our customers' growth
- Only experienced and FRA trained personnel with TWIC cards
- Work closely with our Class 1 connections enhancing service and carload growth
- E-commerce capabilities
- Competitive haz/non-haz car storage rates
- Keen focus on cross-modal services to attract ALL industry
- Approved and qualified ISNET World contractor
- Offer a menu of qualified real estate developers and brokerage services
- Value our role in community economic development - strong, active role with IDA - MPO's
- Active participant and supporter of Operation Lifesaver
- Recognized leader in safety practices and training in our industry
- www.smsrail.com





What's all that ???

- Freight Costs have a direct impact on the movement of goods
- GROW – COMPETE STATUS QUO- SHRINK – DIE
- Rail freight service is the CHEAPEST form of land transport
- Local Commerce needs an edge!
- Incredible Industry Demands vs. Infrastructure/Resources
- Increasing Flexibility and Constant Change
- Industry success targets markets by keeping costs low and quality high

- WHAT DOES THE FUTURE LOOK LIKE.....?



This is where we're headed

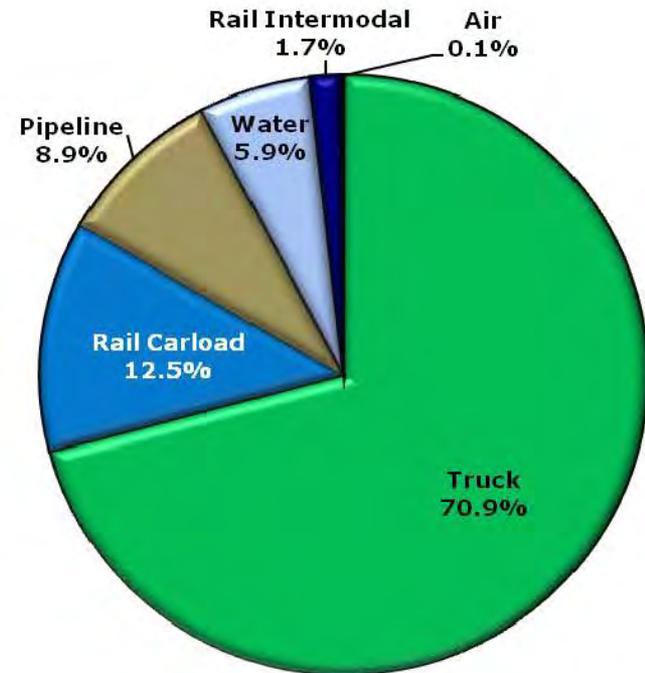
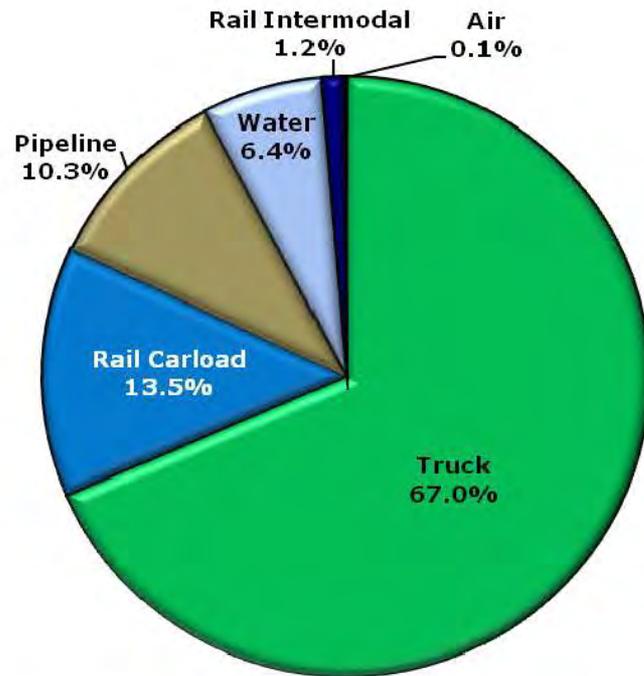




Highway Congestion – 2007 thru 2040

Major Modal Shifts Are In The Past

Distribution of Tonnage by Mode: 2012 vs 2024





The Class 1 Railroads' Priorities

- NORFOLK, VA. - Jan 28, 2013 Norfolk Southern Corporation plans to spend \$2 billion in 2013 for capital improvements to its rail transportation network

- ++++++
- BNSF Railway Company (BNSF) today (2-14) announced a new single-year record capital commitment plan of approximately \$5 billion for 2014, approximately a \$1 billion increase over its 2013 capital spend.

- ++++++

- Union Pacific (1-24-14) said its spending was \$3.6 billion in '13, down from \$3.7 billion in 2012 . Capital spending will rise \$3.9 b in 2014.

□ **Locomotives - Intermodal - Auto Racks - MOW**

A Shortline RR's Role – 'Provide Value'

- eliminate service and infrastructure issues – make industry's experience GREAT on our properties here in the Delaware Valley
- become an extension of their business
- know a customers' business – their competition – their industry
- knowing all personnel: sales – operations – admin
- optimize use of rail directly and indirectly
- assist them expand their business by looking for customers and suppliers
- play the role of commercial advisor for any community related issue impacting a customers' business directly or indirectly



Integrated Partnerships

- A complex commercial environment to navigate



NEEDS

- - cash
- - contacts
- - real estate and facilities
- - equipment
- - experienced people
- - regulations

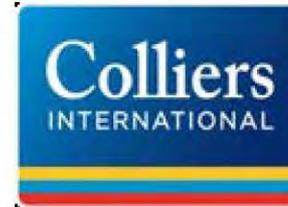
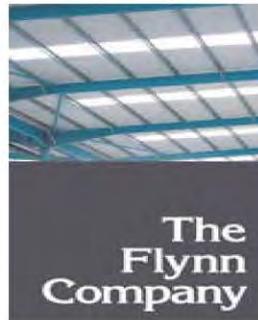




Real Estate Partners



**LIBERTY
PROPERTY
TRUST**



Blue Rock



SOUTHERN NJ/PHILADELPHIA CRE BLOG





Modal Partners



DISTRIBUTIONunlimited
The Strongest Link in Your Supply Chain



Canada
Wheels Canada: 603.642.8307
Wheels MSM Canada: 603.547.4175
USA
Wheels Clipper USA: 603.678.2547
Wheels MSM USA: 603.214.1259





“ Bringing it to the table “





THANK YOU !



QUESTIONS



www.smsrail.com



South Jersey Port Corporation

An Agency of the State of New Jersey

Rail / Port Infrastructure Enhancements

Jay Jones, Deputy Executive Director

South Jersey Port Corporation



- SJPC's enabling legislation established a Port District comprised of the counties of Mercer, Burlington, Camden, Gloucester, Salem, Cumberland and Cape May and all lands and waters in the Delaware river and bay in which the agency may act in the establishment, acquisition, construction, rehabilitation, improvement, operation and maintenance of marine terminals.

- **Mission Statement:** To be in a leadership position by providing services and facilities to accommodate the transportation of goods and commodities by water and land to foster regional economic development for the benefit of our Port District and;

To develop and support waterborne commerce within the Port District and to assist and support the development of business congruent with import and export services and;

To invigorate and create a favorable economic climate that fosters employment and income for our residents and our state.

SJPC Terminal Locations

- Balzano Marine Terminal
- Broadway Terminal
- Salem Marine Terminal
- Paulsboro Marine Terminal
- Foreign Trade Zone #142



The Port of Camden District



Balzano Marine Terminal

Ben Franklin Bridge

Walt Whitman Bridge

Broadway Terminal



Balzano Marine Terminal



2,655 LF Berthing Space

1,168,441 SF of Covered Space

5,000 LF of On-Terminal Rail

122 Acres

Broadway Terminal



2,835 LF Berthing Space

1,316,400 SF of Covered Space

134 Acres

Salem Port Complex

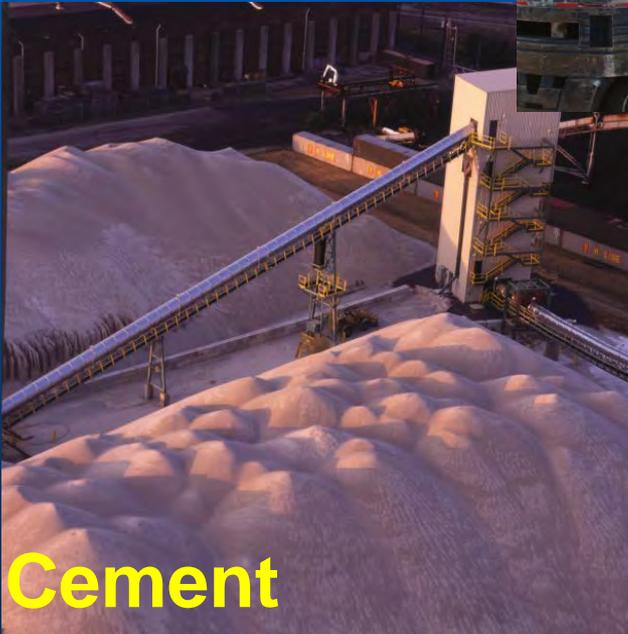




Steel



Cocoa Beans



Cement



Wood Products



By the numbers!



Annually, the SJPC:

- has over 30 tenants producing business revenue and jobs.
- handles 2-4 million tons of breakbulk and bulk cargo
 - ❖ 2014 saw a 24% increase in total tonnage and set a new import steel tonnage record at 900,000 s/tons.
- receives up to 400 ship calls and over 1,000 ship days
- has 120,000 trucks move through the terminals.
- services 3,000 rail cars.



Economic Impacts

The Southern New Jersey Port Complex plays a vital role in moving a wide range of products crucial in our daily lives – fruit and produce, plywood and steel, slag (concrete), cocoa beans, recycled metal and salt.

In 2010, the Southern New Jersey Port Complex supported:

- 1,101 direct jobs**
 - 2,028 total jobs in New Jersey and 3,323 jobs in the US**
 - \$99.1 million in labor income in New Jersey**
 - \$298.1 million in net business income in New Jersey**
 - \$37 million in federal, state and local tax revenues in the State**
- Local and State Tax Revenue: \$9.8 million**
Federal Tax Revenue: \$27.2 million

The Southern New Jersey Port Complex continues to grow with the development of the new Paulsboro Marine Terminal and revitalization of the Port of Salem.

Source: NJDOT March 2012 “The Economic Impacts of the Southern NJ Port Industry 2010”



South Jersey Port Corporation



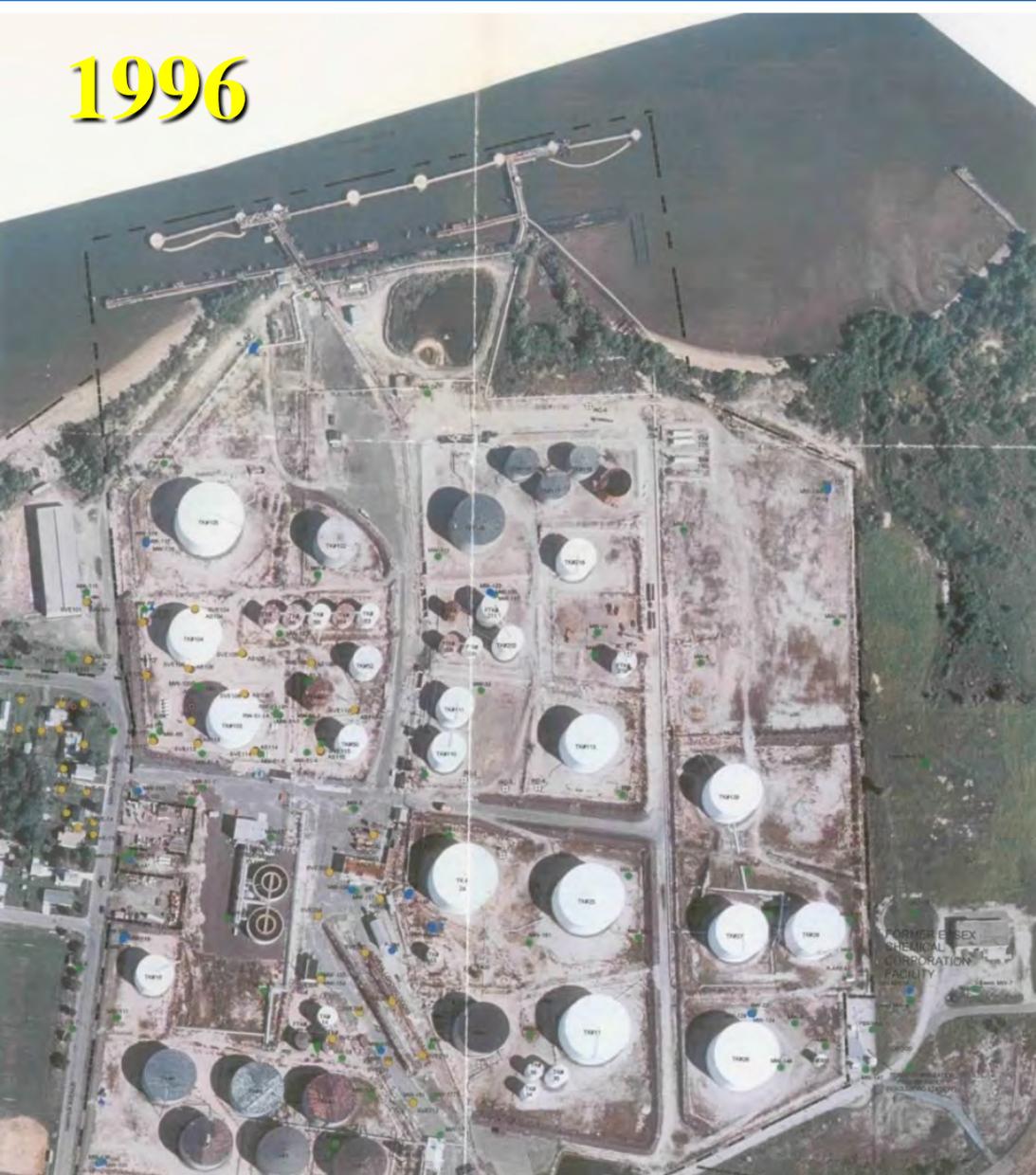
**Paulsboro Marine Terminal &
Bridge / Roadway
Development**

Paulsboro Marine Terminal – Full Build

Port of Paulsboro (RM90) – Location Plan Marine Terminal and Access Road & Bridge

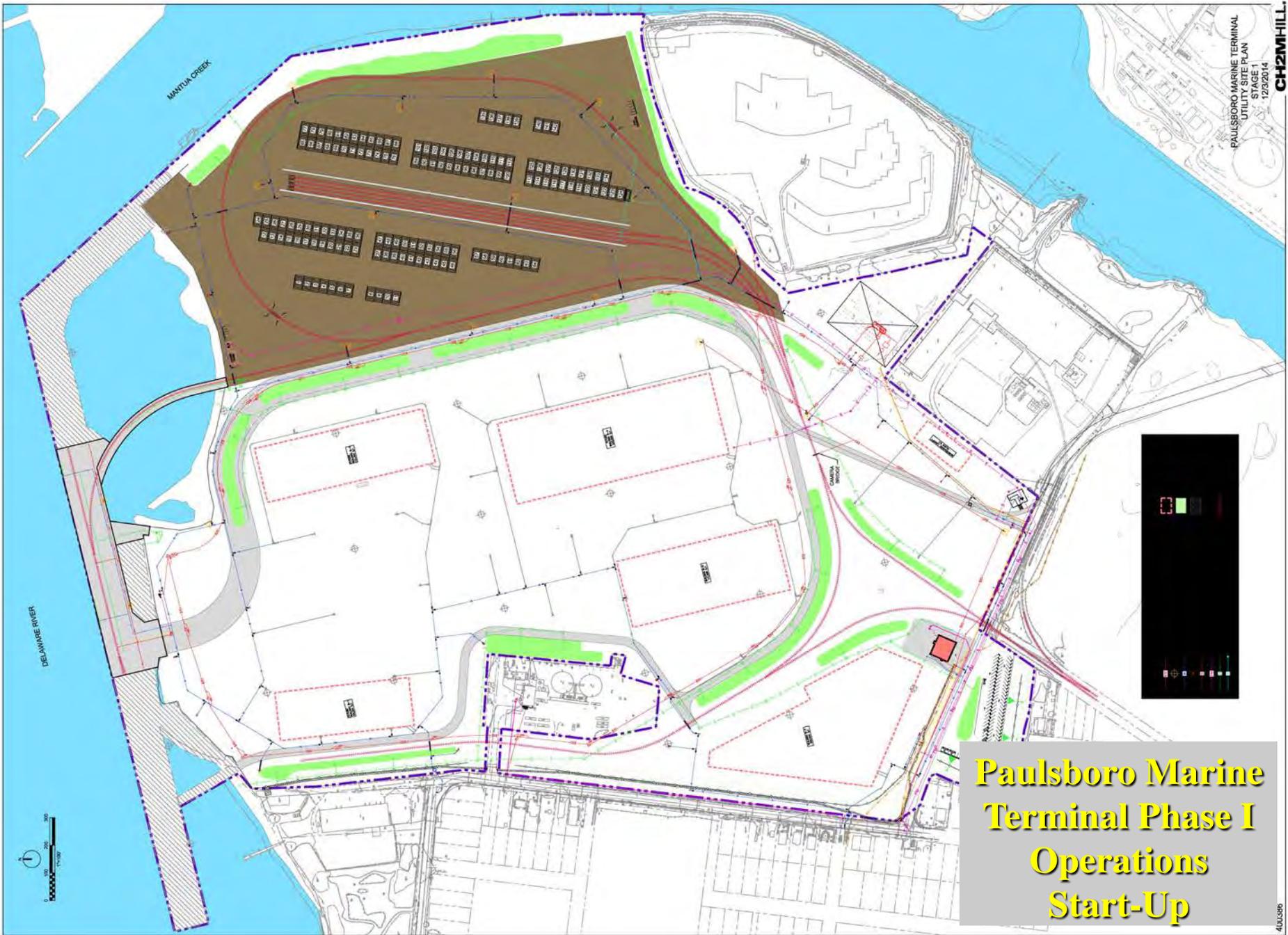
Paulsboro Marine Terminal

1996



2006

FORMER EXXON
CHEMICAL
CORPORATION
FACILITY



Paulsboro Marine Terminal Phase I Operations Start-Up

Wharf Phase I Construction Status – September 2015

Stage I Rail and East Parcel Development Status – September 2015

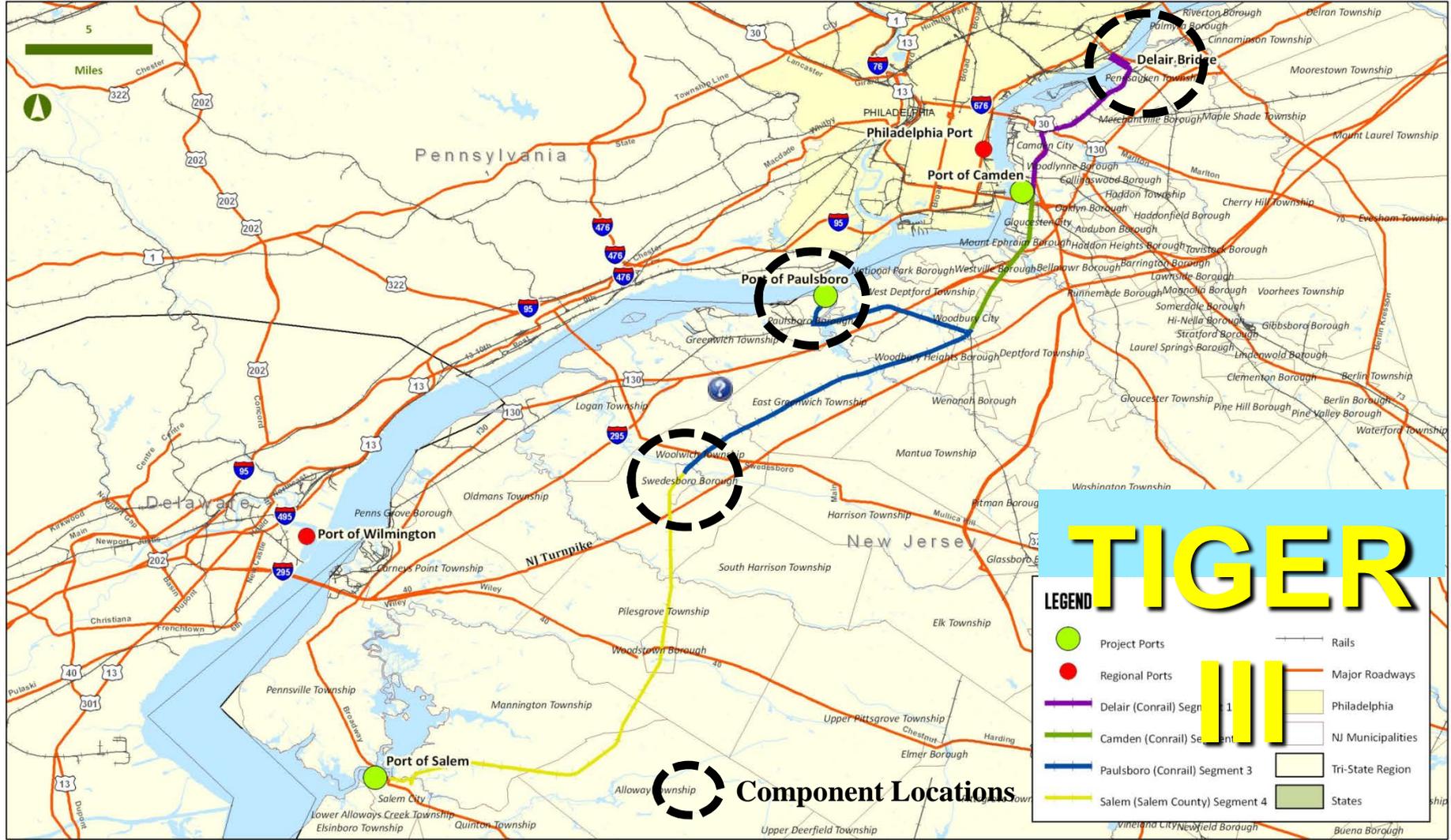


Rail



TRI-STATE REGIONAL INTERMODAL RAIL/PORT IMPROVEMENT PROGRAM

Geographic Segments of Proposed Project



TIGER

LEGEND

- Project Ports
- Regional Ports
- Delair (Conrail) Segment 1
- Camden (Conrail) Segment 2
- Paulsboro (Conrail) Segment 3
- Salem (Salem County) Segment 4
- Component Locations
- Rails
- Major Roadways
- Philadelphia
- NJ Municipalities
- Tri-State Region
- States

TIGER III

Intermodal Rail / Port Improvement Project



- **Component I - Conrail:** Delair Bridge Approach Trestle Rehabilitation
- **Component IIa – Salem County:** Oldmans Trestle Rail Bridge
- **Component IIb – Salem County:** Salem Running Track Rehabilitation
- **Component III – Paulsboro Marine Terminal:** At-Grade Rail Infrastructure
- **Component IVa, b, & c – Camden and Salem:** Additional Running Track Rehabilitation
- **Component IVd – Paulsboro Marine Terminal:** Rail Trestle

TIGER III

Benefits of Rail/Port Improvement Project



- **Delair Bridge Rehabilitation**
 - Preserves & strengthens (286,000 lb) principle rail freight link between NJ & PA with nearly 100,000 carloads / yr
- **Salem: Oldman's Trestle & Running Track**
 - Repairs are essential to retain / grow existing businesses & provide direct connection to Port of Salem
- **Paulsboro: Terminal Rail Access, Yard & Trestle**
 - Recreate linkage & enable cost-effective cargo transport from vessel to / from inland destinations

TIGER III – Project Budget



TIGER III Southern NJ Regional Intermodal Rail / Port Improvement Program				
Major Categories and Tasks		Estimated Cost	TIGER Funding	Local Match
Component I Total	Conrail	\$17,383,785	\$8,691,892	\$8,691,892
Component IIa Total	Salem	\$3,500,000	\$3,000,000	\$500,000
Component IIb Total	Salem	\$3,942,926	\$2,135,756	\$1,807,171
Component III Total	SJPC	\$3,200,000	\$2,283,874	\$916,126
Component IVa Total	Conrail	\$380,000	\$190,000	\$190,000
Component IVb Total	Conrail	\$5,048,488	\$2,524,244	\$2,524,244
Component IVd Total	SJPC	\$9,967,445	\$2,524,244	\$2,524,244
TOTAL		\$43,422,644	\$21,350,010	\$17,153,677

Conrail - Delair Trestle Bridge

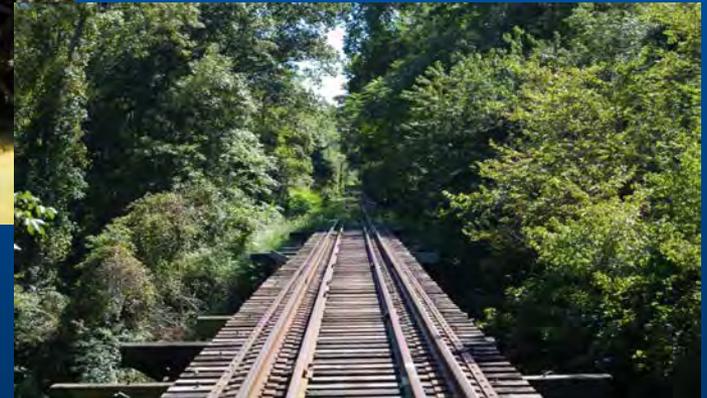
Conrail - Delair Bridge Approach Trestle

1st Outage: 8 Spans (NJ) - November 2013





Oldmans Trestle



SALEM BRANCH
RAILROAD



Oldmans Trestle



SALEM BRANCH
RAILROAD



Running Track



SALEM BRANCH
RAILROAD



Running Track

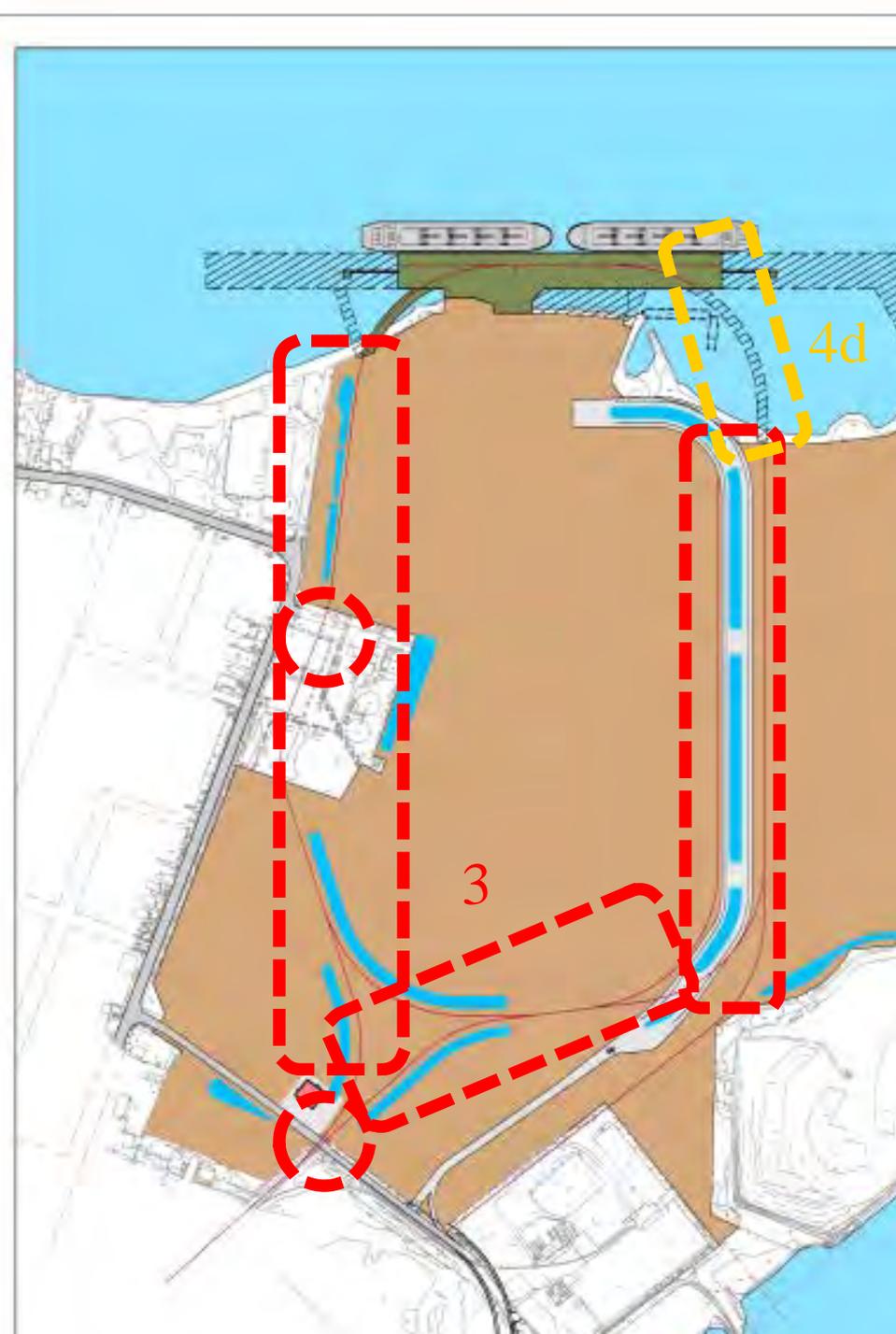


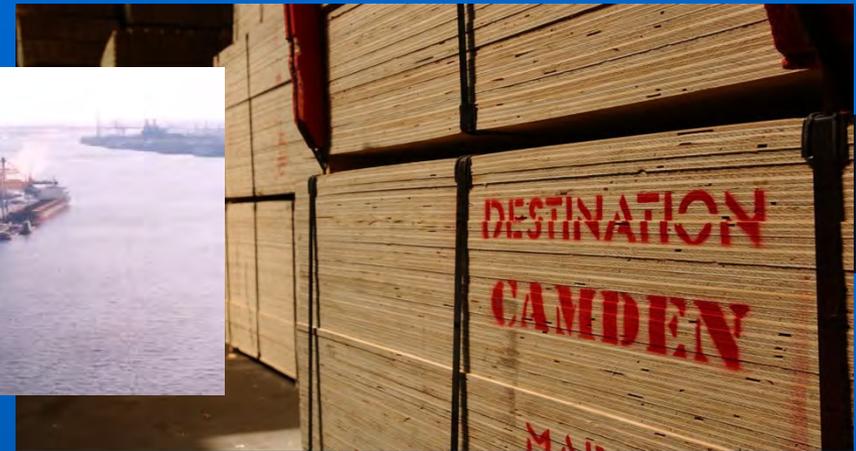
SALEM BRANCH
RAILROAD

TIGER III – Project III & IVd

Paulsboro @ Grade Rail Crossing and Track

- Rail Crossings-Universal Rd
 - ✓ Concrete bed
 - ✓ Continuous welded rail
 - ✓ Crossbuck signs
 - ✓ LED flashing lights
 - ✓ Pavement markings
- 11,000 LF Rail Track & Storage / Loading Track
- 650 LF Rail Trestle





South Jersey Port Corporation



**HOLTEC TECHNOLOGY
CENTER DEVELOPMENT AT
BROADWAY TERMINAL**

Holtec Technology Center at Broadway Terminal

New Industrial Sidetrack and Realignment of Roadway

South Jersey Port Corporation



Emily Costello, AICP, Senior Planner, Office of Smart Growth
DVRPC Freight Advisory Committee Meeting, October 14, 2015



What is gc2040?



What is a master plan?
Why do one?



**PHASE 1:
Community
Visioning**

(August 2014-June 2015)

COMPLETE

**PHASE 2:
Master Plan
Update**

(August 2015-June 2016)

ONGOING

**FUTURE
PHASES:
Updates to
Other Elements
of the Master
Plan**
(TBD)

gc2040 Phase 1: Community Vision

Let's Talk





What groups met
with the gc2040 team?

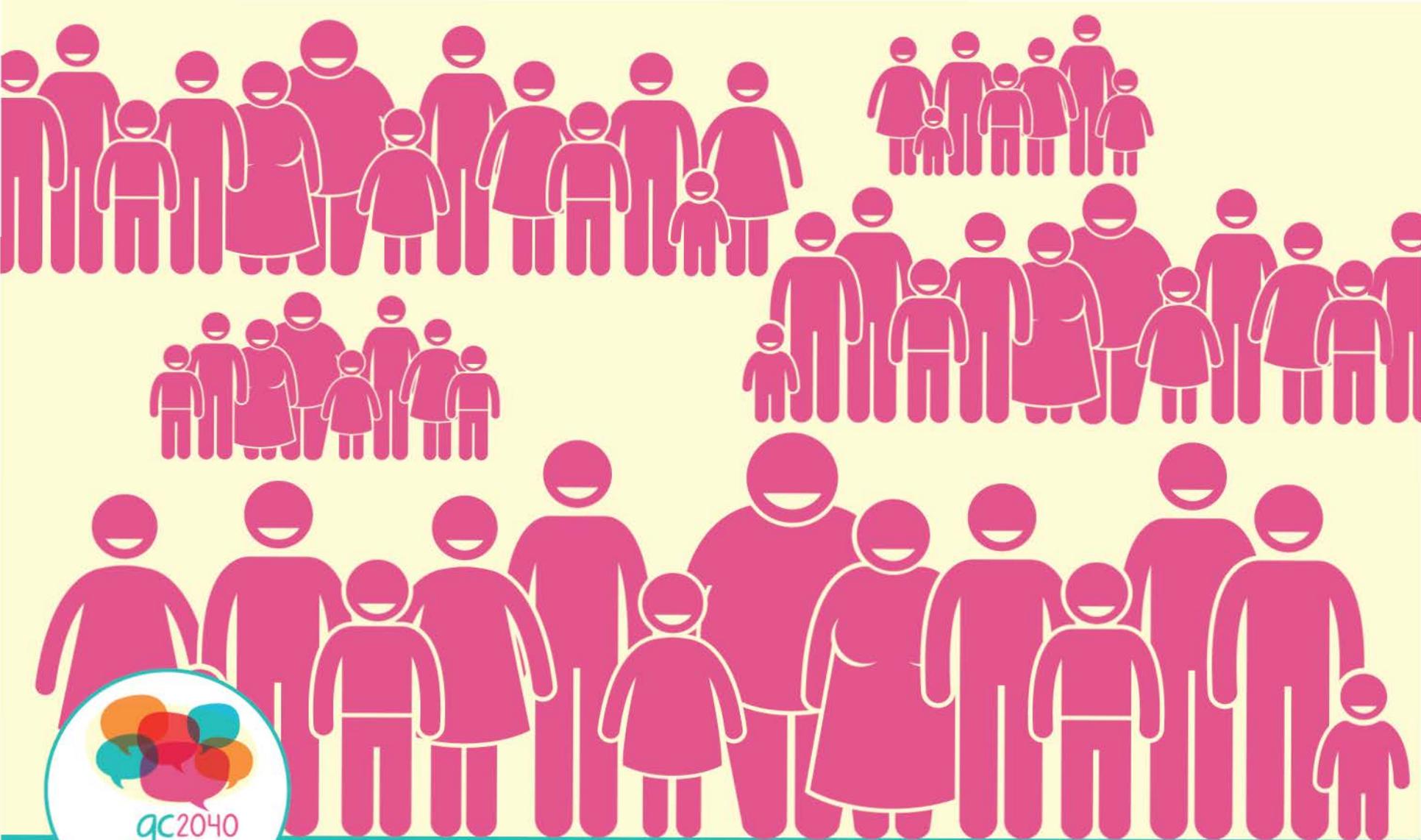
APA NJ Transportation Committee ● Borough of Glassboro Business Administrator ● Churchill Associates
 (County Wastewater Plan Consultant) ● Conserve Wildlife Foundation, County Board of Freeholders,
 County Board of Taxation ● County Builder's League ● County Chamber of Commerce ● County Clerk,
 County Cultural and Heritage Commission ● County Department of Public Works ● County Disability
 Services ● County Economic Development ● County Emergency Responders ● County Engineer ● County
 Fire Marshall ● County Health Department ● County Human Services ● County Improvement Authority
 County Legal Department ● County Library System ● County Mayors' Association ● County Mosquito Control
 Commission ● County Office of Land Preservation ● County Parks & Recreation ● County Partners for
 Wellness ● County Planning Board ● County Public Information Department ● County Senior Services
 Department ● County Youth Services ● Cross County Connections ● Director of the County Library System,
 Farmworkers Support Committee ● FEMA ● Franklin Township Mayor and Councilperson ● Gloucester County
 NAACP ● Greater Egg Harbor Watershed Association ● Greater Woodbury Arts Council ● Kennedy Health
 System ● Logan Township Administrator ● Monroe Township Planning Board ● New Jersey American Water,
 New Jersey Conservation Foundation ● NJDEP Division of Fish and Wildlife GIS ● Pinelands Commission,
 Rowan College at Gloucester County ● Rowan University ● Rutgers University Cooperative Extension,
 Soil Conservation District ● South Jersey Land & Water Trust ● Southern New Jersey Development Council,
 St. John of God Community Services ● State Office of Planning Advocacy
 Stuart Wallace, LLC (County Mitigation Plan Consultant)
 U.S. Army Corps of Engineers ● U.S. Geological Survey
 Unexpected Wildlife Refuge ● Veterans' Affairs
 Woolwich Township Director of Community Development.



59 groups!



Who took the survey?



2,088 people!

gc2040 Phase 1: Community Vision

Let's Talk



Research



gc2040:

People, Place, Prosperity
(Community Vision)



Public Survey
gc2040.com



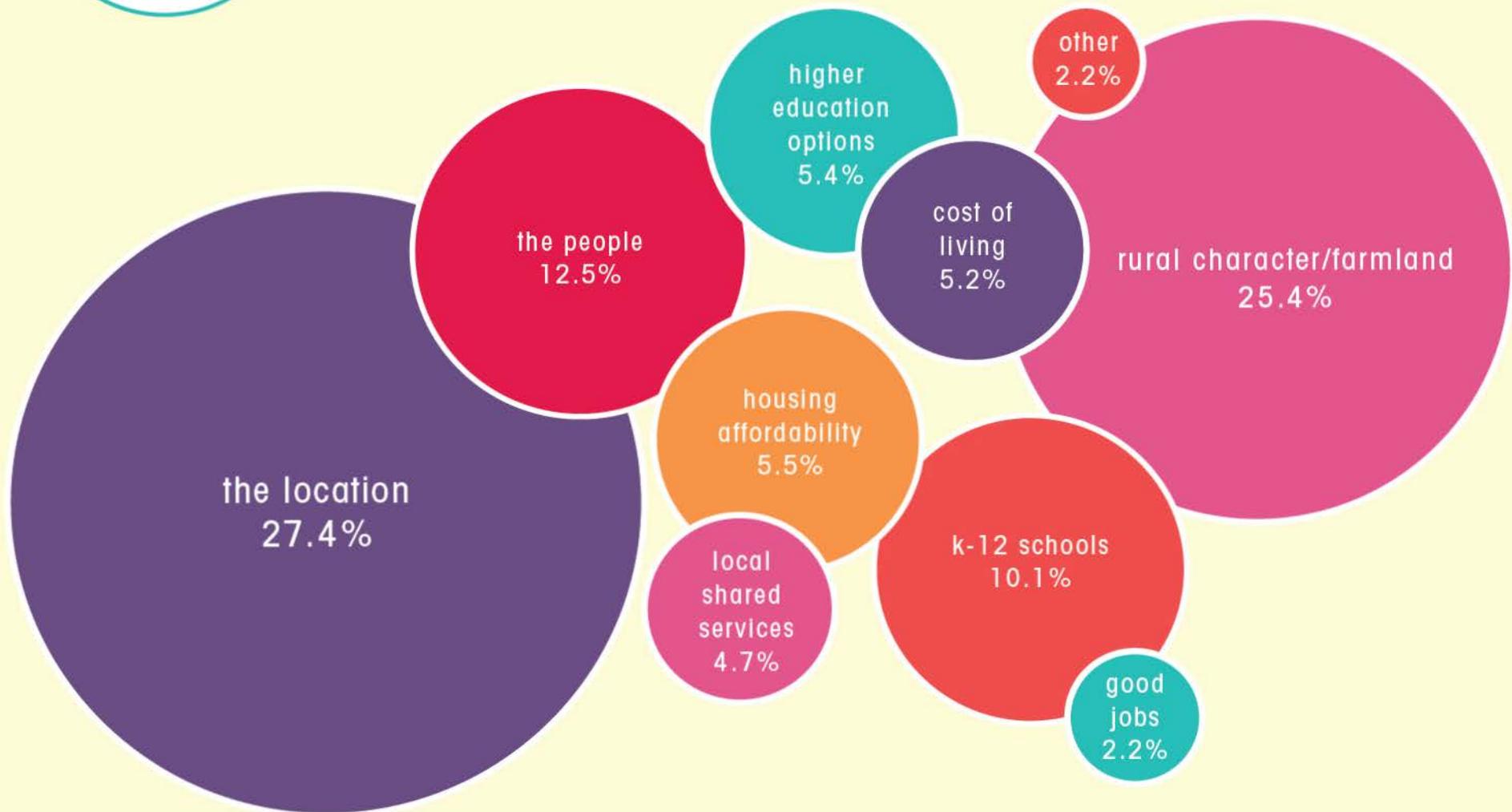
Stakeholder
Interviews



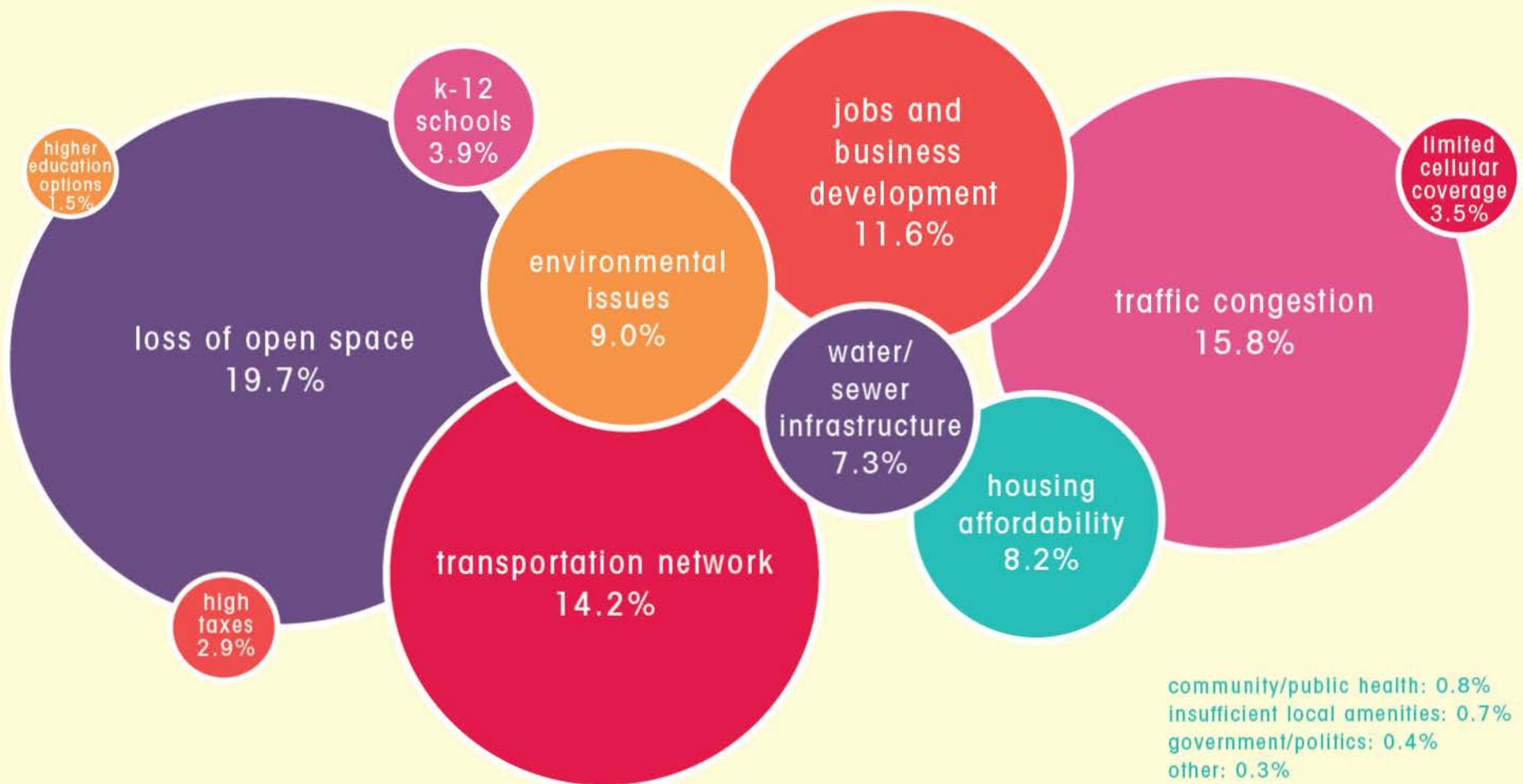
County Strengths & Challenges



What do people like best about Gloucester County?



What do people think are Gloucester County's biggest challenges?

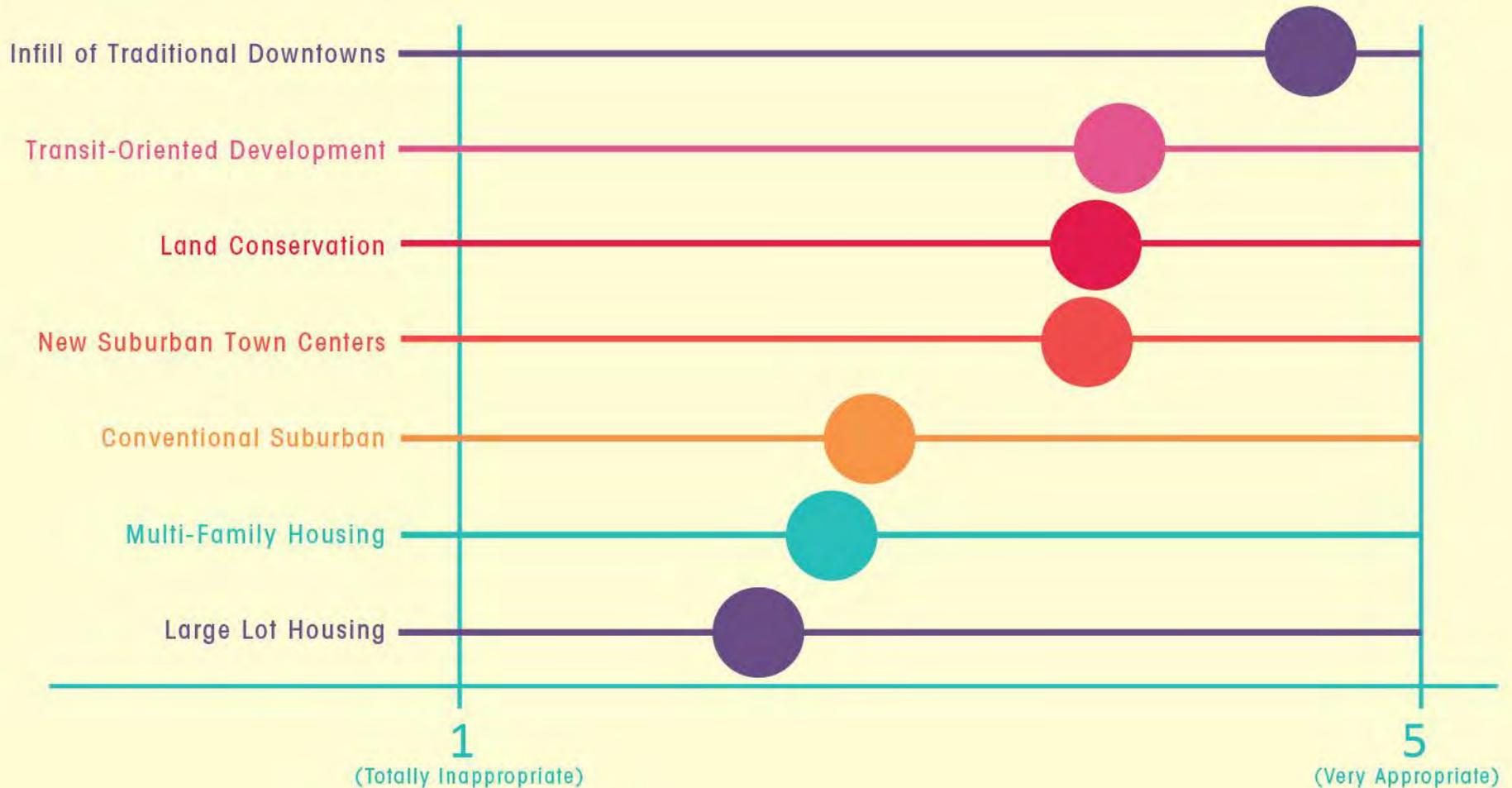




Future Development in the County



What types of development are appropriate for Gloucester County?

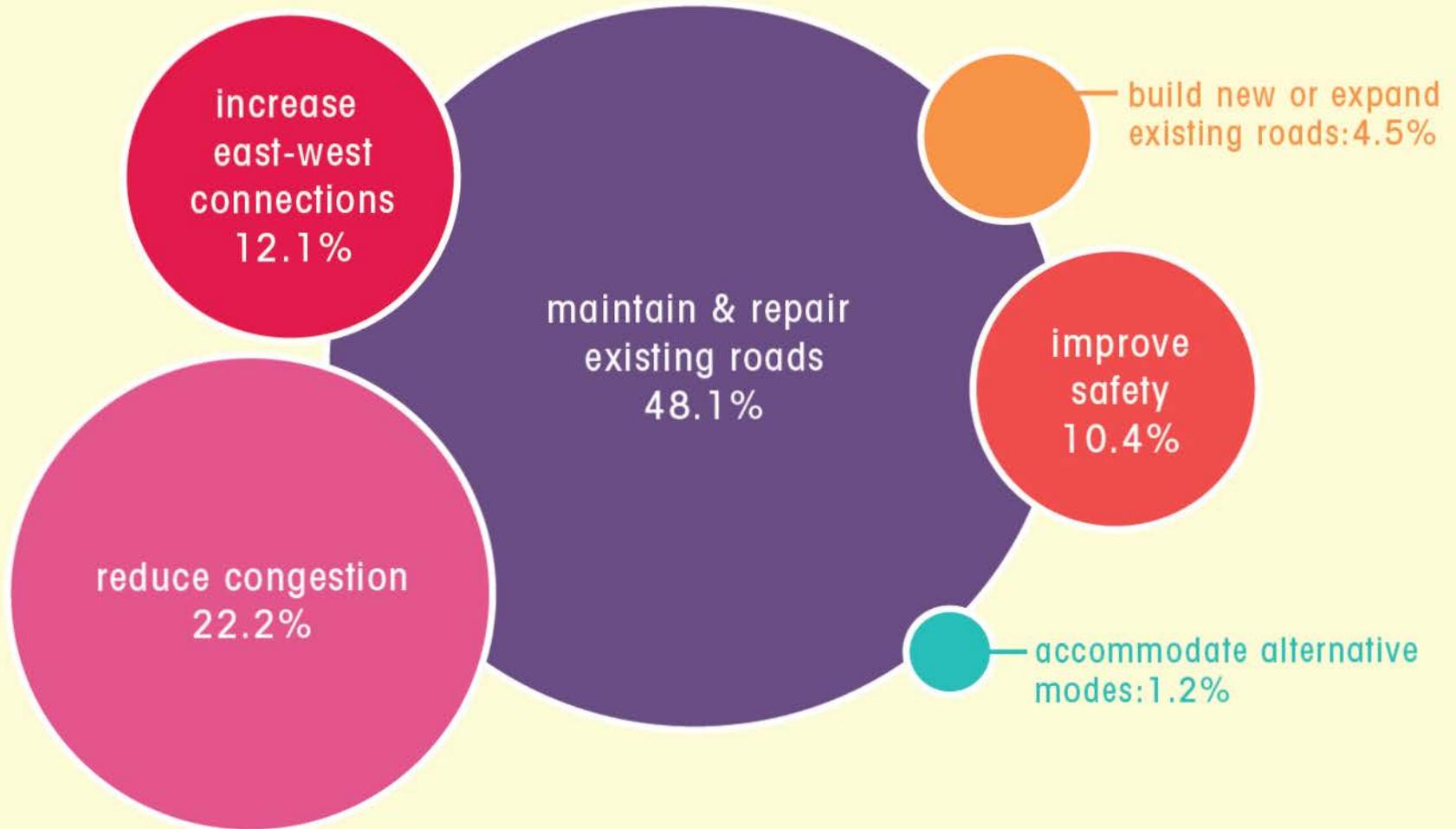




County Transportation Network

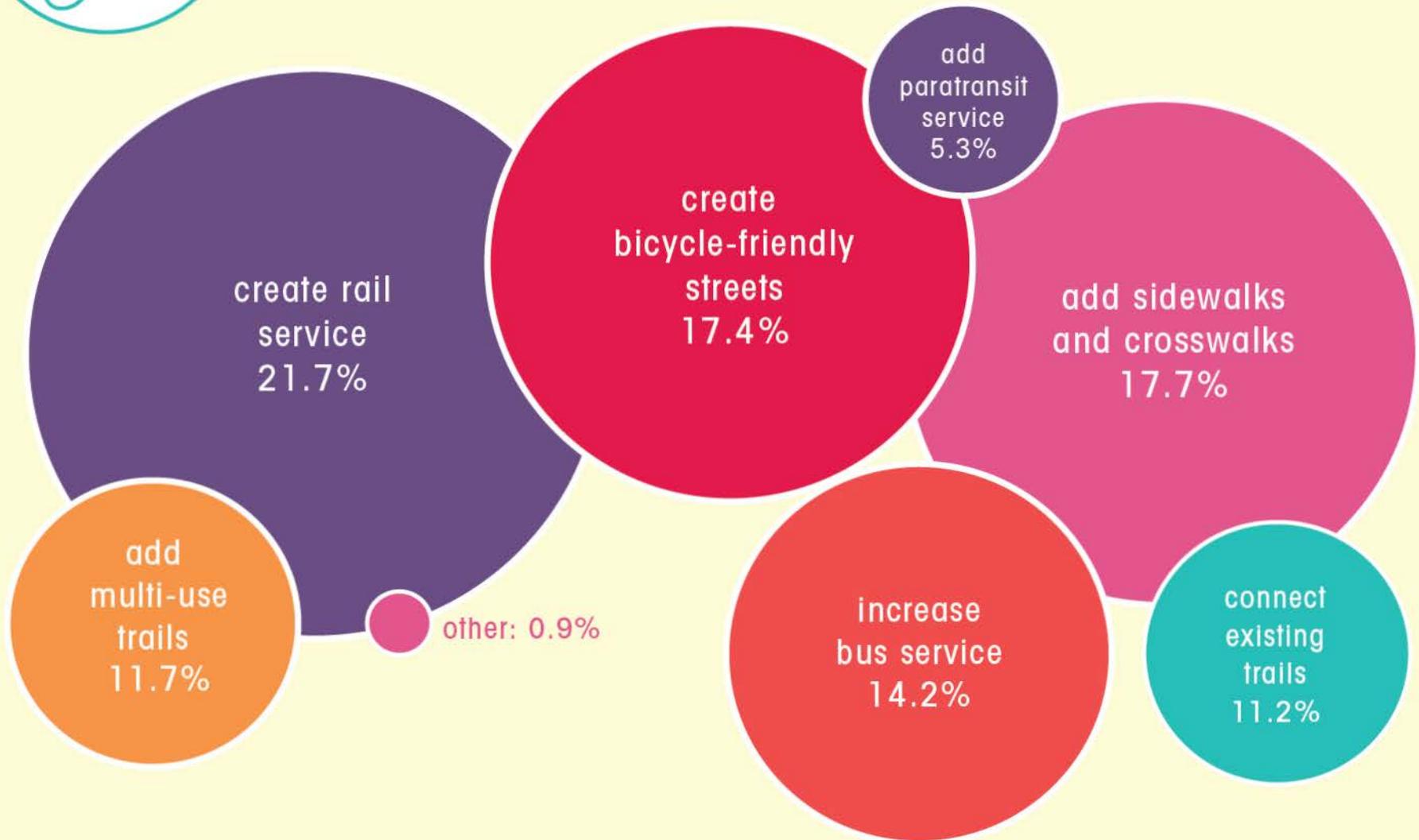


What are people's roadway improvement priorities?





What are people's priorities for the entire transportation network?





County Quality of Life



How satisfied are people with the quality of life in Gloucester County?



somewhat satisfied: 52.5%



very satisfied: 23.5%



neutral: 12.7%

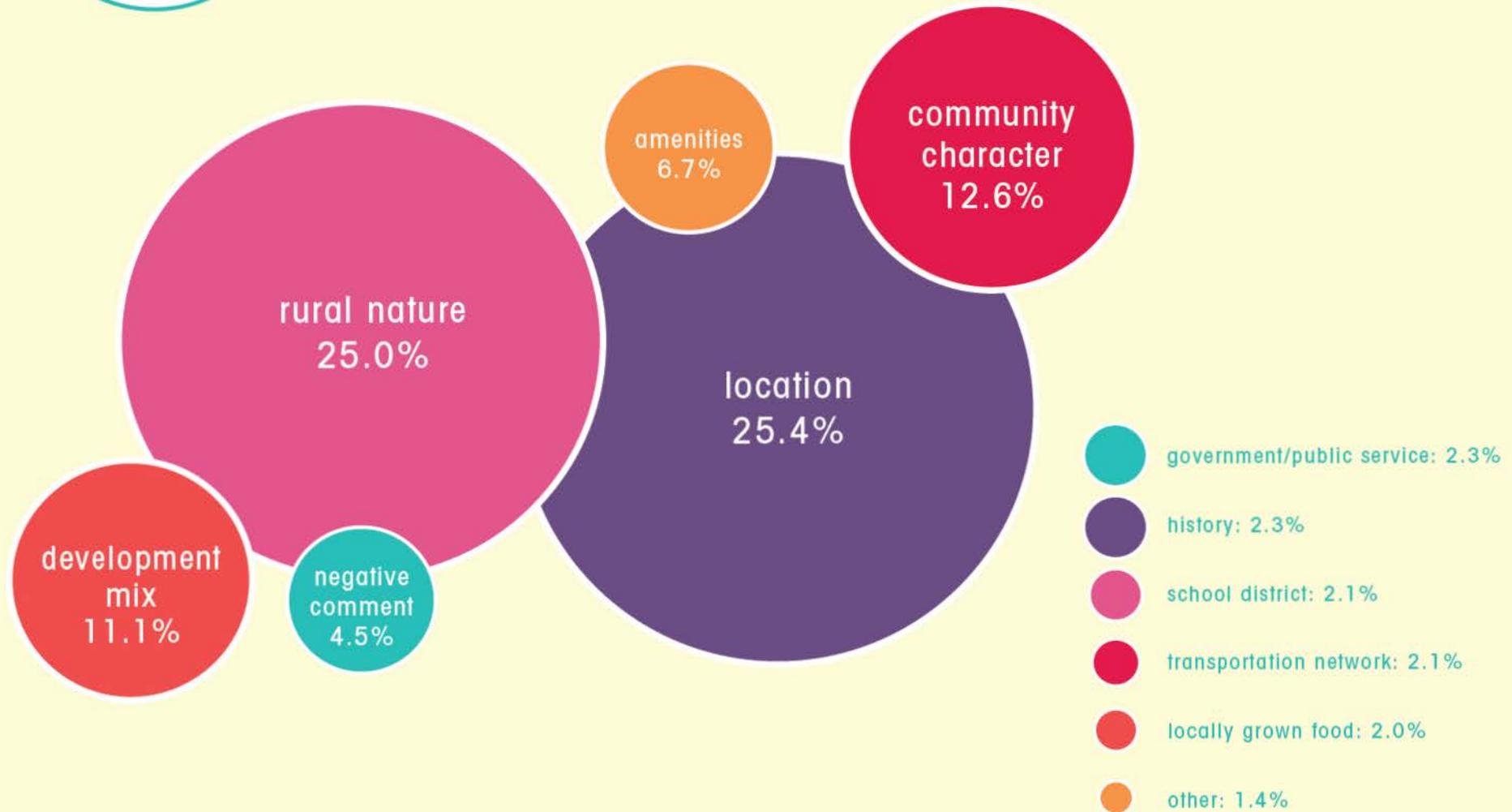


somewhat
dissatisfied: 9.3%



very dissatisfied: 2.0%

What is unique or special about Gloucester County?





Community Vision Themes & Goals

Themes



People



HEALTHY
COMMUNITIES



EDUCATION

Place



PROMOTION



CONNECTIVITY



PRESERVATION

Prosperity



ECONOMIC
DEVELOPMENT



AFFORDABILITY

GOALS



People: Healthy Communities Goal

Enable residents to live healthy lifestyles regardless of age, income, or ability.

Increase opportunities for both passive and active outdoor recreation.

Enhance access to all types of health care.

Enable residents to age in place.

Increase public safety both within communities and on the county's roadways.



People: Education Goal

Increase local opportunities for knowledge and success.

Support Rowan University and Rowan College at Gloucester County, recognizing that they are economic engines as well as education providers.

Make local schools centers of the community, ensuring that they are adequately funded, staffed, and meeting statewide standards.

Promote local agricultural education programs that celebrate the county's rural heritage and ensure that it continues.

Educate citizens, allowing and encouraging them to participate in local and county decision-making.



Place: Promotion Goal

Attract new residents and visitors to the county.

Market the county's proximity to Philadelphia and Wilmington to attract new residents who increase the residential tax base.

Advertise the county's recreational/cultural attractions and agricultural tourism opportunities throughout the Greater Philadelphia region with an emphasis on attracting those passing through to the Jersey Shore.



Place: Connectivity Goal

Make strategic infrastructure improvements.

Mitigate traffic congestion by making necessary roadway improvements and providing transportation alternatives to the private automobile.

Balance the county's transportation system by making it easier to travel on foot, by bicycle, or on public transit.

Reinforce downtowns and main streets throughout the county as civic and commercial centers.



Place: Preservation Goal

Maintain the county's rural character and variety of community types.

Preserve open space, natural and wooded areas, and farmland.

Encourage local agricultural production.

Provide a range of housing options that maintain the county's mix of rural, small town, and suburban development styles.



Prosperity: Economic Development Goal

Develop high quality jobs and local amenities.

Create quality jobs for residents of all abilities.

Provide better access to job centers throughout the county.

Retain graduates from local educational institutions by providing walkable neighborhoods with easy access to local amenities.

Increase the variety of local amenities desired by residents: parks, arts and cultural events, walkable downtowns, farm stands, and attractive shopping destinations.



Prosperity: Affordability Goal

Maintain the relatively low cost of living while retaining the quality of life valued by county residents.

Keep taxes at a competitive rate when compared to the state and region.

Continue and expand the county's successful shared services program.

Provide quality housing for residents of all income levels and life stages.



People



HEALTHY
COMMUNITIES



EDUCATION

Place



PROMOTION



CONNECTIVITY



PRESERVATION

Prosperity



ECONOMIC
DEVELOPMENT



AFFORDABILITY

GOALS

gc2040 Phase 2: Master Plan Update

Let's Keep Talking





Questions?

Commodity Profile

CRUDE OIL IN THE DELAWARE VALLEY



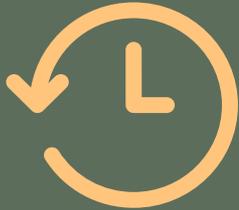
Michael Ruane

Delaware Valley Goods Movement Task Force
October 14, 2015



WHAT ARE WE TALKING ABOUT?

a regional commodity profile



history in the region



impact on economic
development



key facilities and
modal distribution



transportation
implications

THE DELAWARE VALLEY REGION



A BRIEF HISTORY

the advancement of oil drilling

- 1859 The Drake Well, Titusville, PA
- Pennsylvania dominated production through late 19th century
- Market driven by kerosene

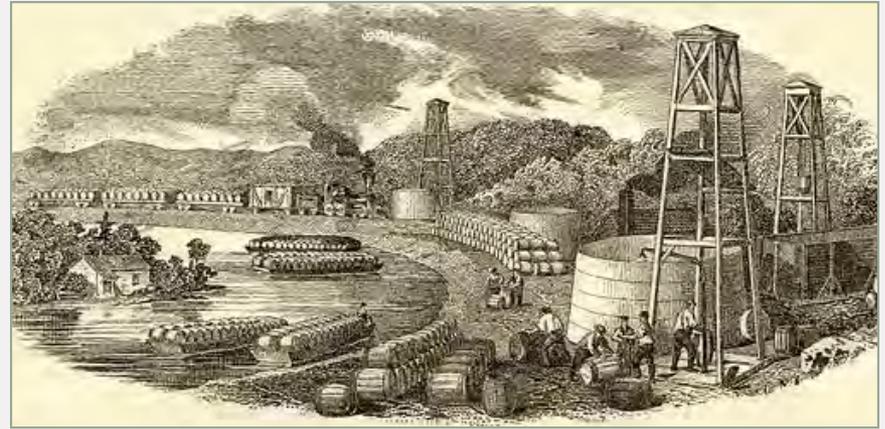


Penn oil 1864 Licensed under Public Domain via Commons

A BRIEF HISTORY

late 19th century transportation of oil

- Rail served as a key link to refineries and ports
- Led to the development of the 42 gallon barrel standard
- Early tank cars supported 80-90 barrels per car



top: 42 gallon barrels in transport; bottom: Densmore "tank car"

infrastructure link:
Pennsylvania Railroad

A BRIEF HISTORY

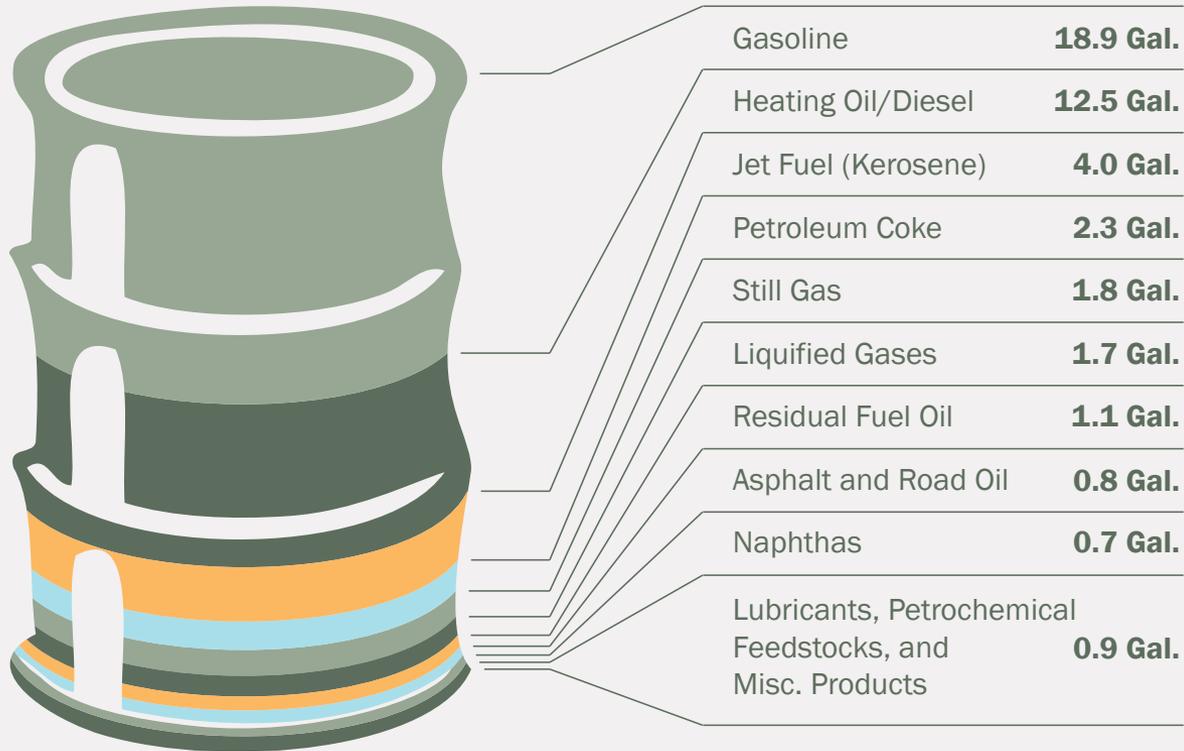
philadelphia: a key link to world markets



Advertising lithograph of Atlantic Petroleum Storage Company at Girard Point Surveyed and drawn by E. Hexamer, 1866 | Source: The Library Company

MODERN CRUDE OIL REFINING

what does a barrel of oil yield?

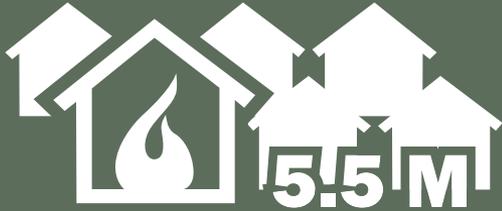


42 gallons of crude oil = **44.8** gallons of refined products

Source: U.S. Energy Information Administration, *National Refinery Yield for 2014*

HOW WE USE THESE PRODUCTS

fuel and so much more



Northeastern U.S. households
rely on heating oil



third largest supplier to
Biopharmaceutical industry



Petrochemicals are the building blocks for:

- plastics
- paints
- soaps
- flooring
- insulation
- synthetic fibers

ECONOMIC DEVELOPMENT IMPACT

regional employment by cluster



4,100
petroleum refining

2010
cluster employment



5,700
downstream chemical

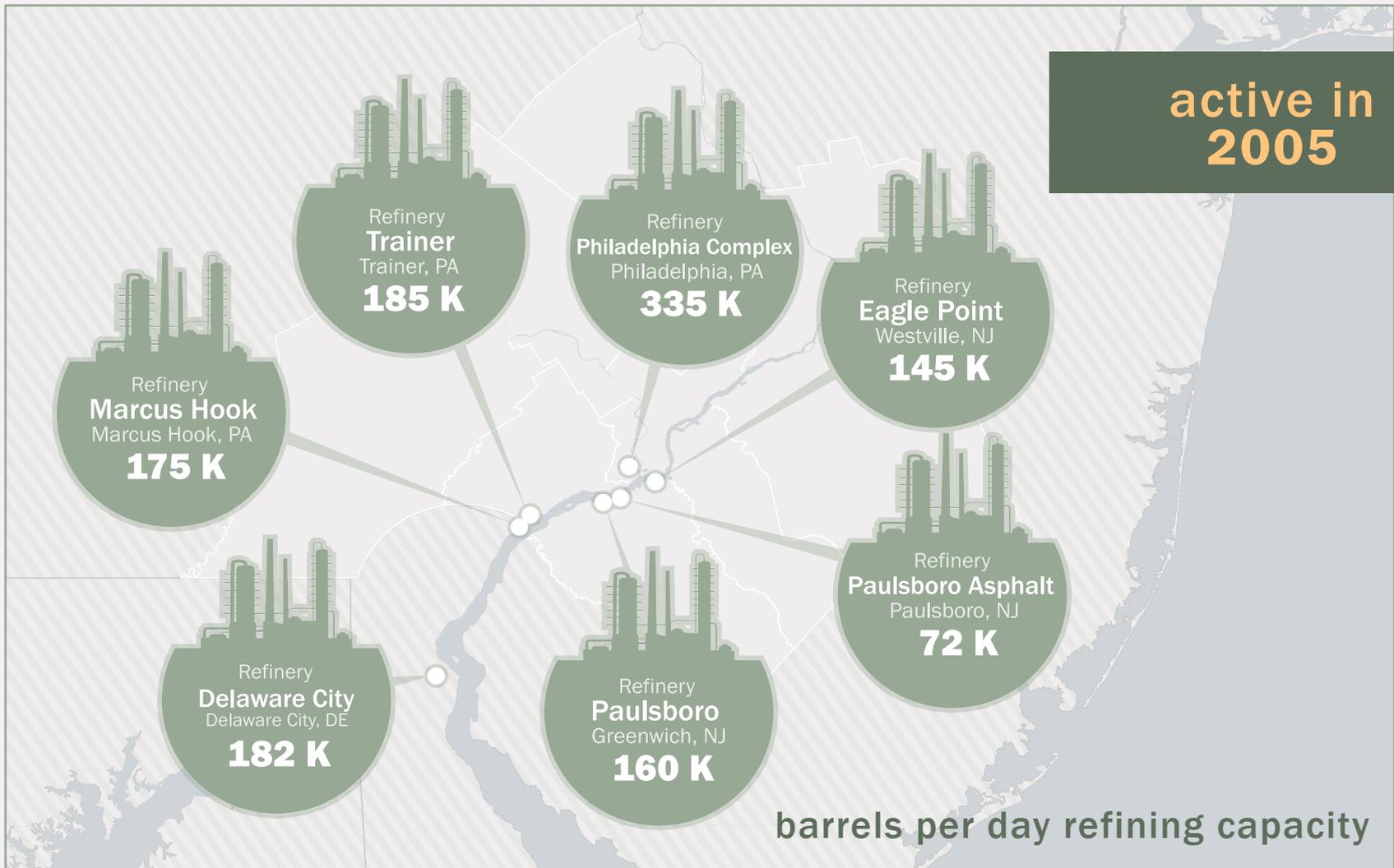
11,700
plastics



9,900
biopharmaceuticals


strong and growing clusters

REFINERIES OF THE DELAWARE VALLEY



MAJOR MARKET SHIFTS GLOBALLY

locally significant impacts

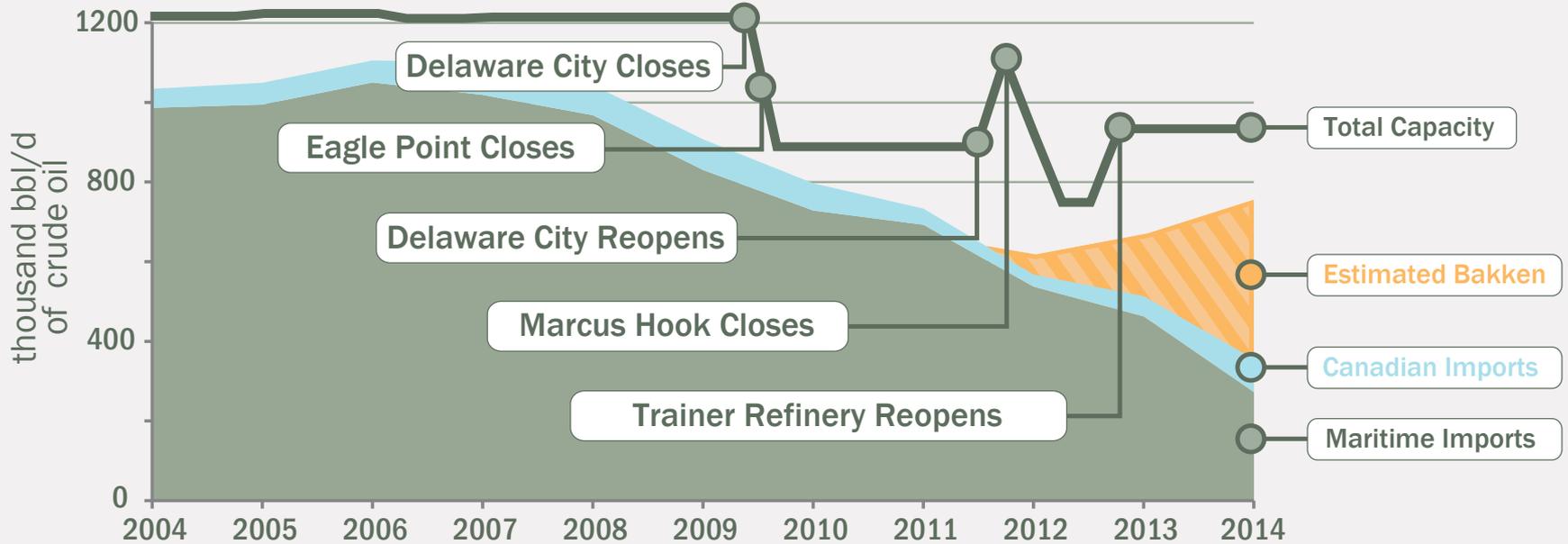


2006
to
2014

increasing fuel economy
fewer vehicle miles traveled
cheaper domestic crude

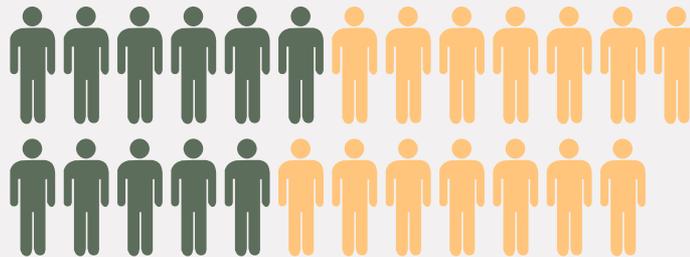
A DECADE OF REGIONAL CHANGE

daily refinery throughput



 = 200 refining sector employees

 lost job  retained job



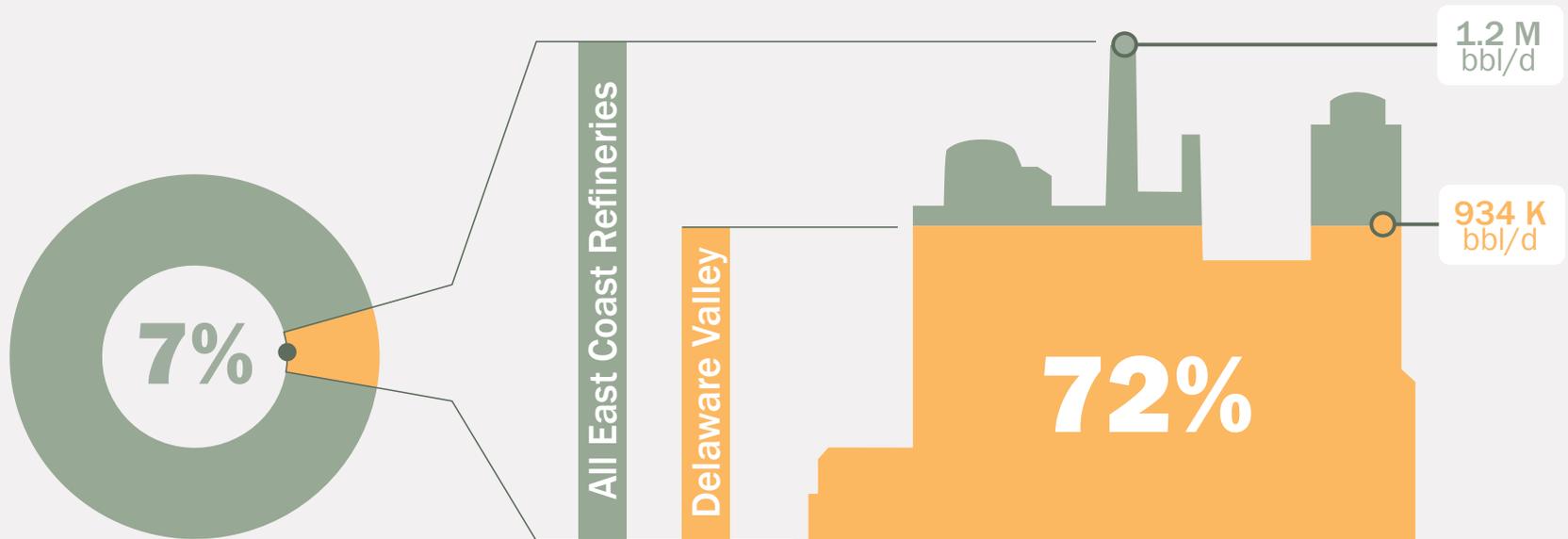
2,800
jobs lost

STILL A LEADING REFINING REGION

a new reality in 2014

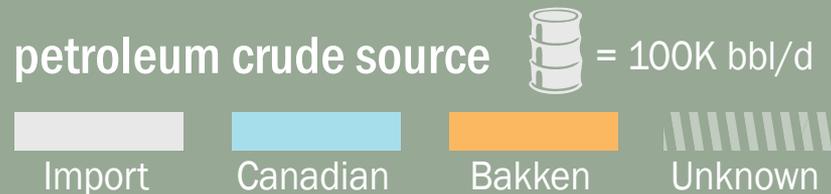
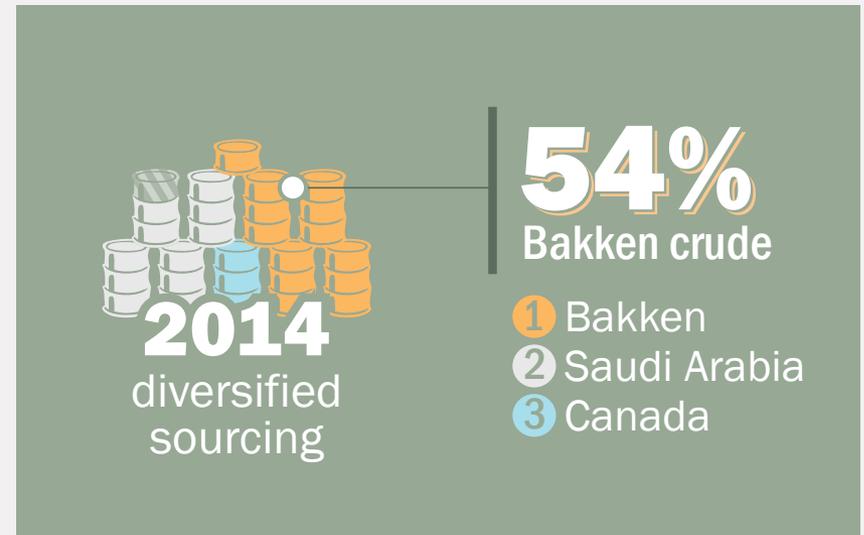
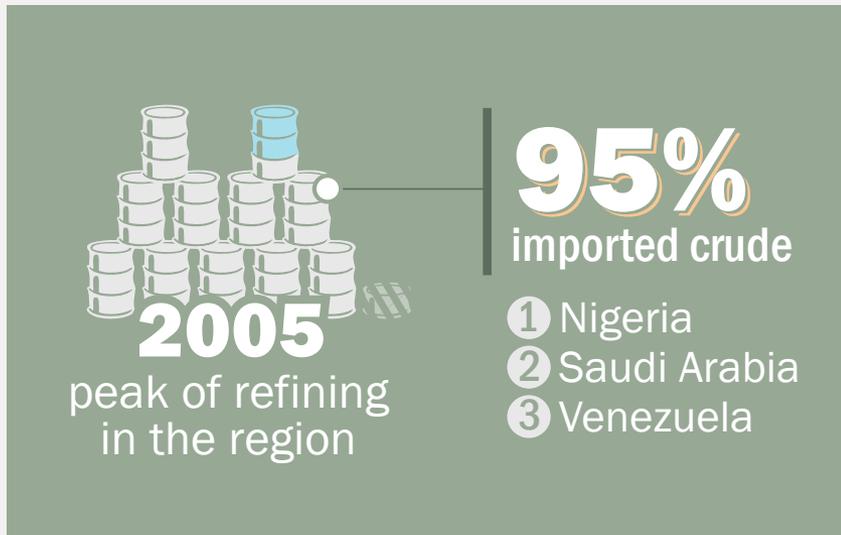
The east coast held only **7%** of the total national refining capacity

The **five remaining Delaware Valley refineries** are responsible for **72%** of this capacity



NEW SOURCING KEY TO STABILIZATION

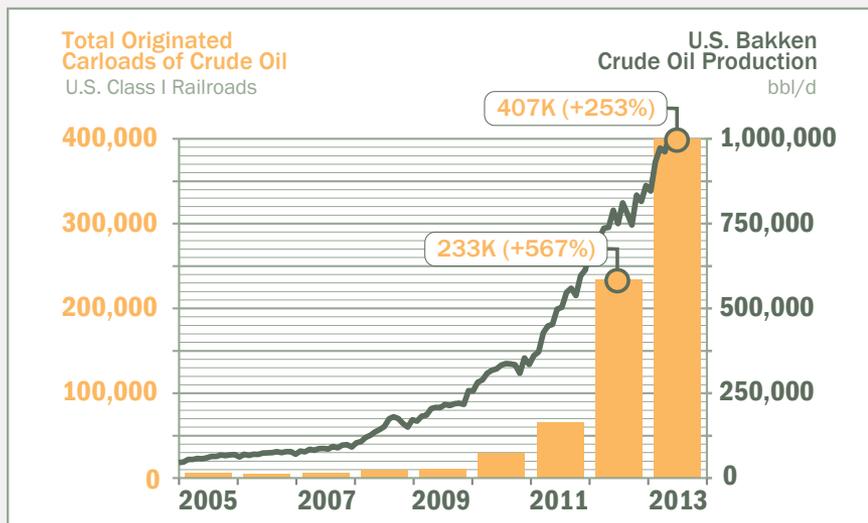
shift to domestic shale oils



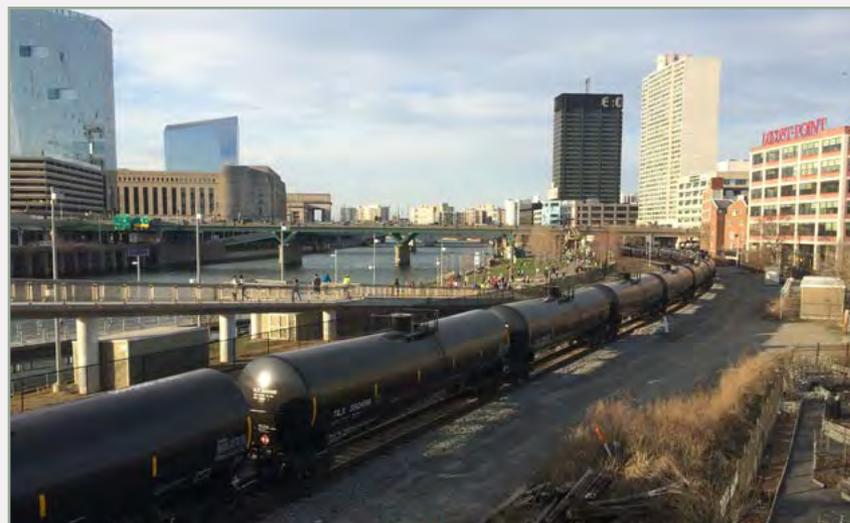
WHY NOW? WHY DOMESTIC?

new technology and an old workhorse

- fracking opens mid-continent reserves (Bakken) play
- competitive price point
- rail infrastructure, unit-trains allow flexible movement
- 1 train = 3,000,000+ gallons

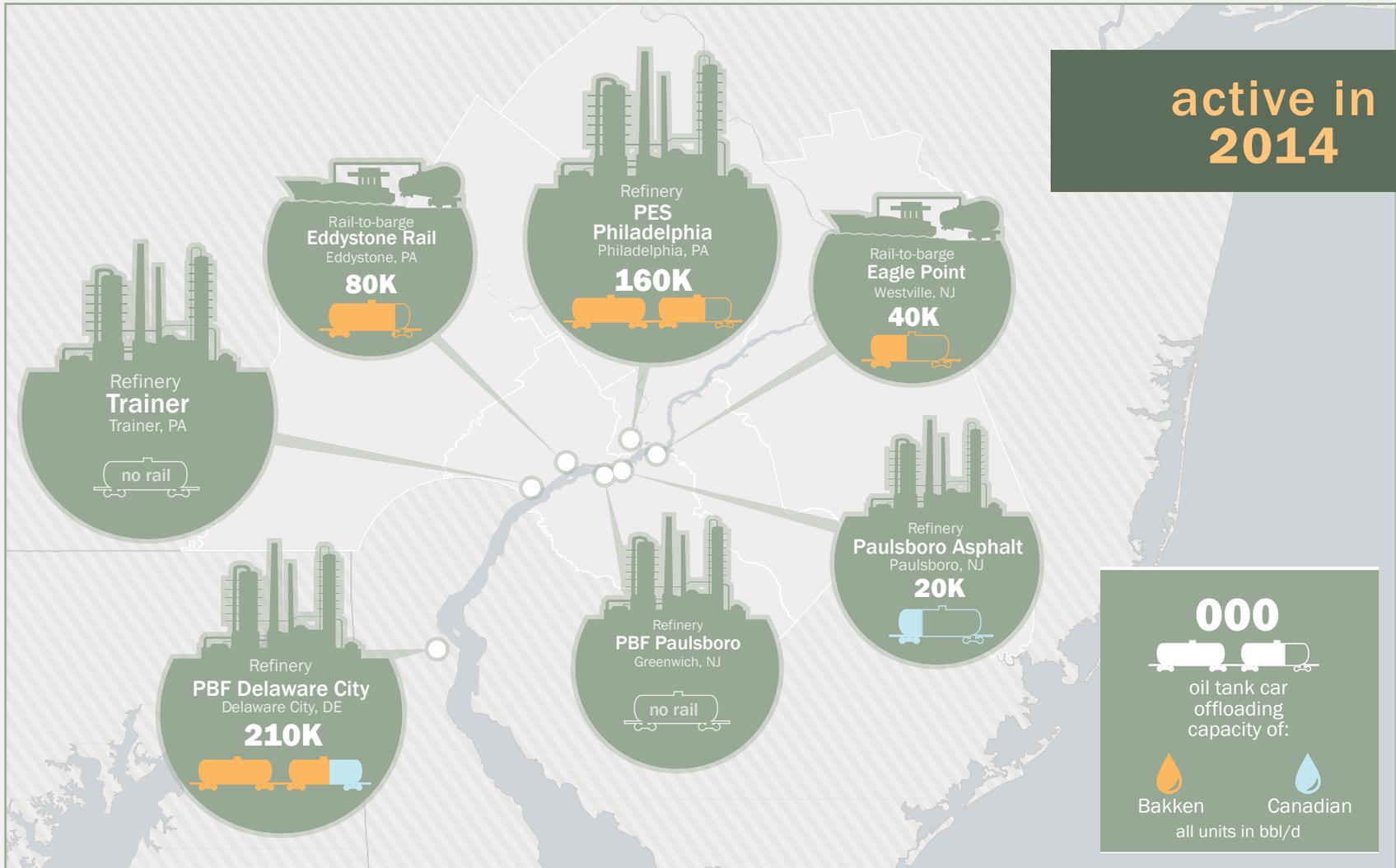


Source: AAR, *Moving Crude by Rail* (December 2013)
Dept. of Mineral Resources North Dakota (May 2014)

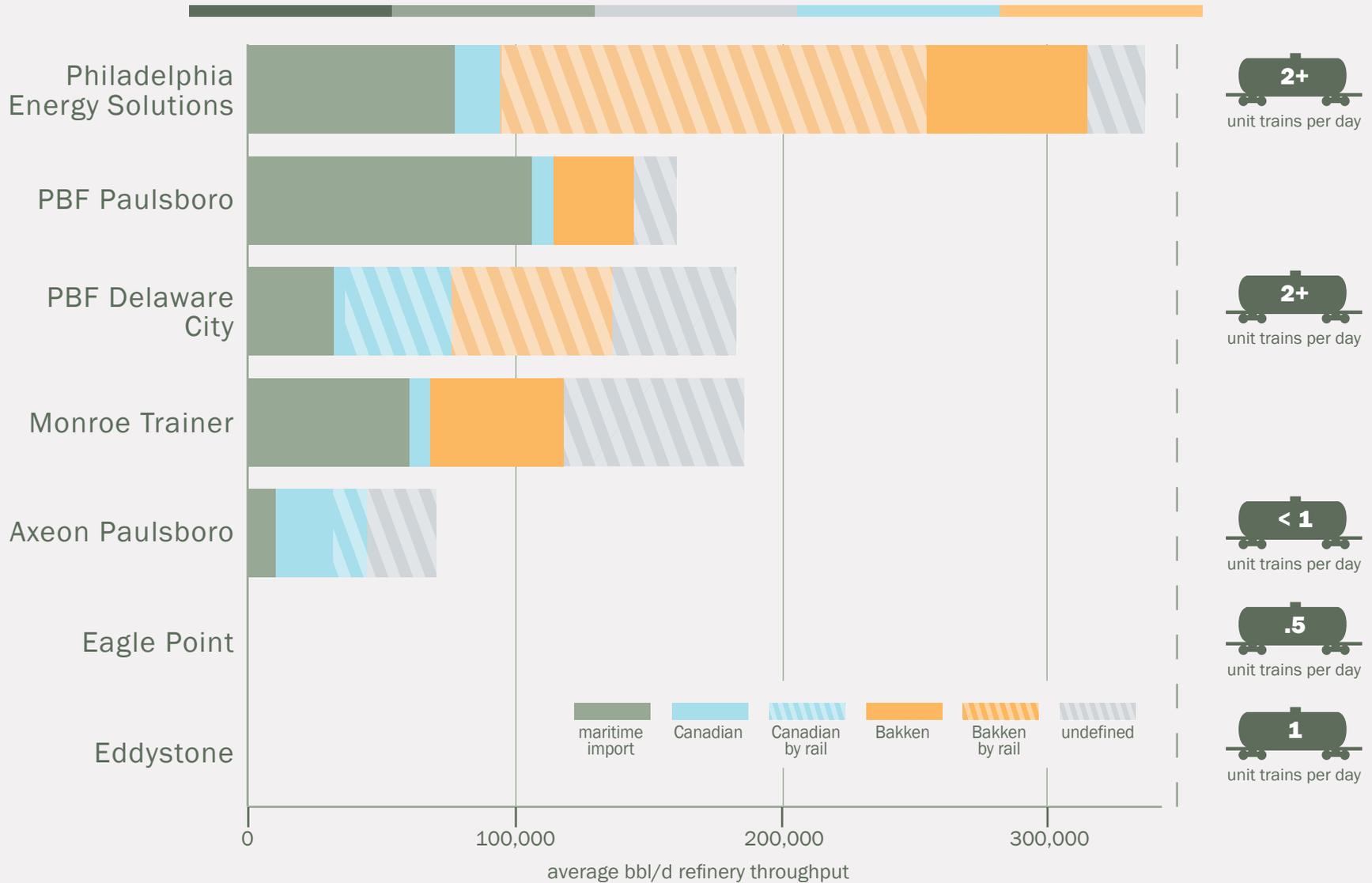


A Bakken crude oil unit train destined for Philadelphia makes its way along the Schuylkill River on the Trenton Subdivision south of Walnut Street. | Source: Connie Chang

REGIONAL CRUDE-BY-RAIL FACILITIES



REGIONAL CRUDE-BY-RAIL FACILITIES



CRUDE UNIT TRAINS IN THE REGION

a visible change in mode choice

- **4 loaded unit trains** traverse DVRPC nine-county region **daily**
- Planned capacity up to 6



Crude unit train in Philadelphia, PA | Source: Connie Chang

58 municipalities

6 major river crossings

28 separated highway crossings

17 at-grade highway crossings

28+ miles of shared right-of-way with SEPTA, Amtrak, and NJ Transit

RAILROAD TRANSPORTATION IMPACTS

- **safety #1 cited concern**

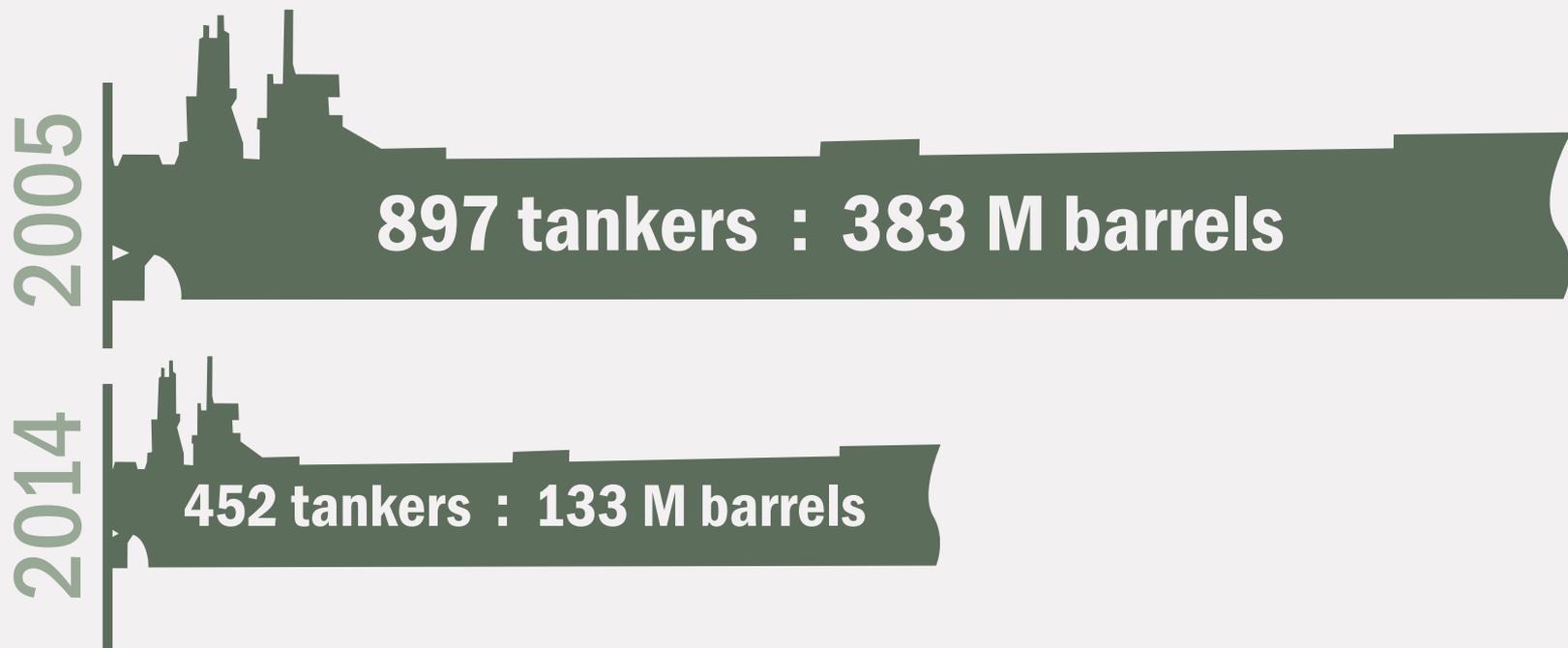
nationwide crude-by-rail incidents

2013	Incident Type	2014
5	derailment	7
4	loaded crude unit train derailment	4
4	with release of crude oil	3
2	causing fire or explosion	1
1.2M gallons	total crude released	57K gallons
0 injuries or fatalities		

- capacity and delays for other rail traffic regionally
- new focus on infrastructure age and quality

MARITIME TRANSPORTATION IMPACTS

- lower imports result in fewer ship calls and less lightering activity



IS CRUDE-BY-RAIL HERE TO STAY?

most likely, but with caveats

- domestic oil pricing, shipping costs, and contracts all contributing factors
- regional refineries remain invested in rail moves of domestic oil

Delivery Costs

 from North Dakota

\$10–20/barrel

 from West Africa

\$2–4/barrel

QUESTIONS/COMMENTS

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