

The New York Ferries:

The *other* transit

The bottom of the slide features several decorative elements consisting of concentric circles in various shades of blue, resembling ripples in water. There are three large, prominent circles in the lower half, and a smaller one in the upper right corner.

The Staten Island Ferry



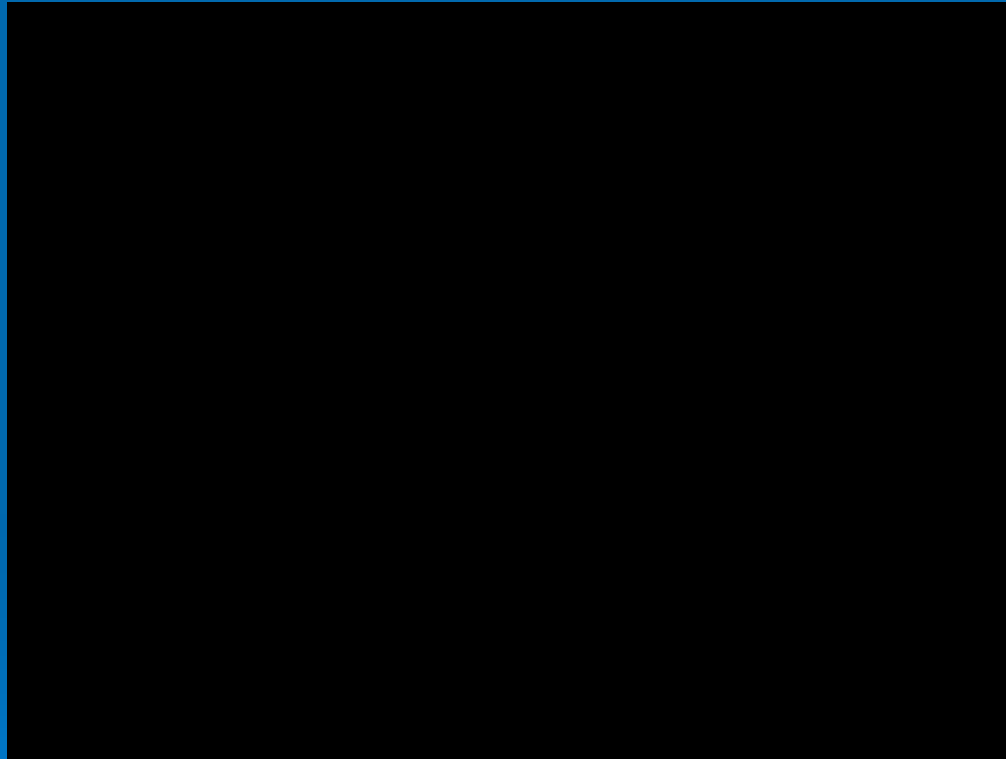
Source: wikipedia.com



Source: siferry.com

- Begins 1898
- Transferred to NYC in 1905
- 5.2 mile route
- 65,000 average daily ridership
- 19 -20 million riders each year
- Free!

Launching a new ferry...



Source: siferry.com

The Fleet...

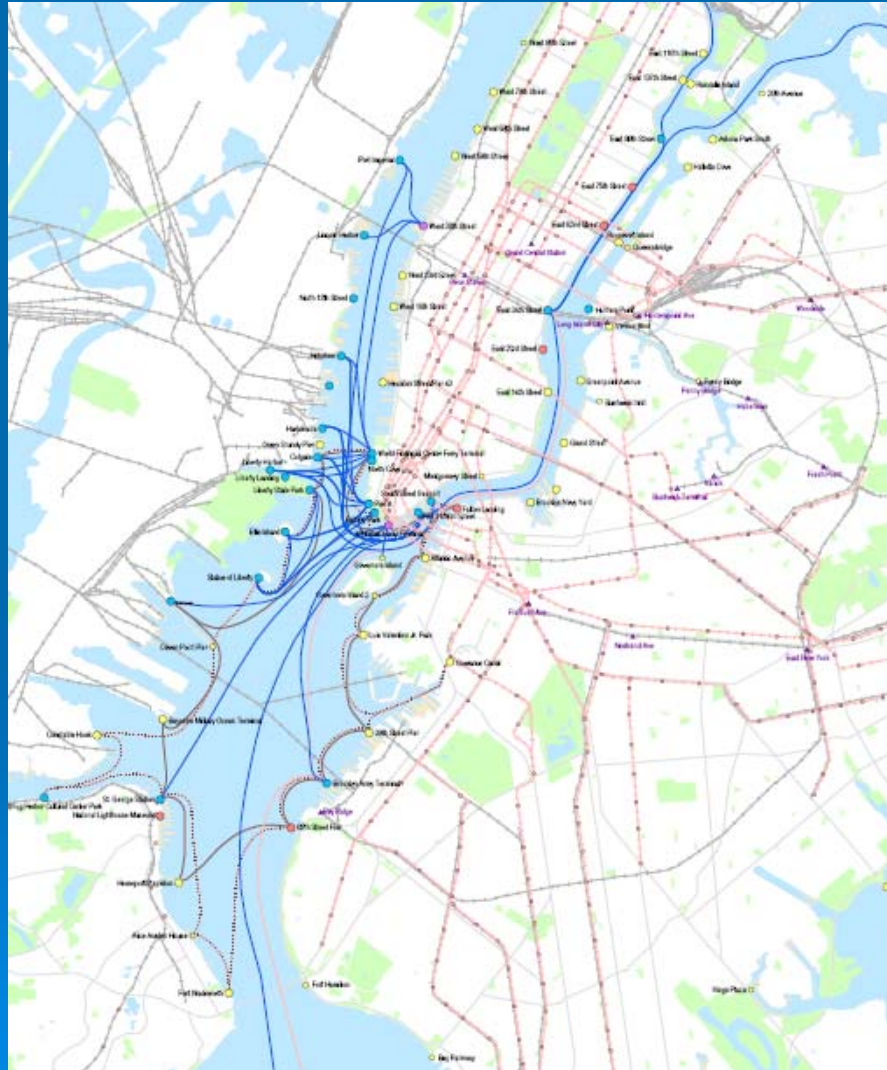


Private Ferries too...



Source: NY/NJ Port Authority

Proposed Routes...

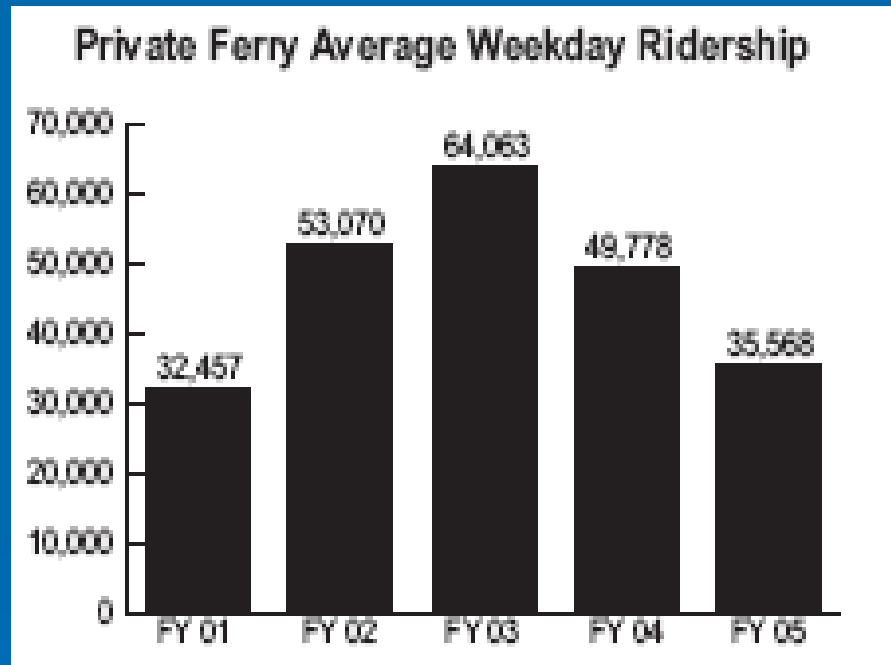


Source: Metropolitan Waterfront Alliance

Private Ferries increasing

- No private companies before 1985
- NYWaterway enters the market → ups and downs...
- On 9/11 ferries evacuate 300,000 people in one day
- Afterwards, ferry ridership doubles until PATH station reopens in 2003.

Private ferry ridership



Source: NYDOT annual report 2005

New Investments

- Both terminals of the Staten Island Ferry got a face-lift.
- Almost \$200 *million* on facilities
- Whitehall St. Terminal
- St. George Terminal and LEED certification...



Green Design and LEED

- Leadership in Energy and Environmental Design
- U.S. Green Buildings Council
- Long check list of “green” strategies

LEED
LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN

LEED-NC Version 2.1 Registered Project Checklist
NKC High School
North Kansas City, MO

Yes ? No

Sustainable Sites 14 Points

<input checked="" type="checkbox"/>	Prereq 1	Erosion & Sedimentation Control	Required
<input checked="" type="checkbox"/>	Credit 1	Site Selection	1
<input checked="" type="checkbox"/>	Credit 2	Development Density	1
<input checked="" type="checkbox"/>	Credit 3	Brownfield Redevelopment	1
<input checked="" type="checkbox"/>	Credit 4.1	Alternative Transportation, Public Transportation Access	1
<input checked="" type="checkbox"/>	Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms	1
<input checked="" type="checkbox"/>	Credit 4.3	Alternative Transportation, Alternative Fuel Vehicles	1
<input checked="" type="checkbox"/>	Credit 4.4	Alternative Transportation, Parking Capacity and Carpooling	1
<input checked="" type="checkbox"/>	Credit 5.1	Reduced Site Disturbance, Protect or Restore Open Space	1
<input checked="" type="checkbox"/>	Credit 5.2	Reduced Site Disturbance, Development Footprint	1
<input checked="" type="checkbox"/>	Credit 6.1	Stormwater Management, Rate and Quantity	1
<input checked="" type="checkbox"/>	Credit 6.2	Stormwater Management, Treatment	1
<input checked="" type="checkbox"/>	Credit 7.1	Landscape & Exterior Design to Reduce Heat Islands, Non-Roof	1
<input checked="" type="checkbox"/>	Credit 7.2	Landscape & Exterior Design to Reduce Heat Islands, Roof	1
<input checked="" type="checkbox"/>	Credit 8	Light Pollution Reduction	1

Yes ? No

Water Efficiency 5 Points

<input checked="" type="checkbox"/>	Credit 1.1	Water Efficient Landscaping, Reduce by 50%	1
<input checked="" type="checkbox"/>	Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation	1
<input checked="" type="checkbox"/>	Credit 2	Innovative Wastewater Technologies	1
<input checked="" type="checkbox"/>	Credit 3.1	Water Use Reduction, 20% Reduction	1
<input checked="" type="checkbox"/>	Credit 3.2	Water Use Reduction, 30% Reduction	1

Yes ? No

Energy & Atmosphere 17 Points

St. George Terminals “green-ness”

- Rainwater collection to reduce runoff
- Irrigation of 18,000 sq ft roof garden
- Garden has lots of milkweed for migrating monarch butterflies
- Energy efficient materials
- Roof angled for maximum/minimum sun

Additional projects all over the metropolitan area

- West Midtown Ferry Terminal at 38th St
- East 90th Street terminal renovation
- East 39th Street reconstruction
- World Financial Center floating terminal
- Weehawken Port Imperial Terminal
- Hoboken – renovate historical docks
- Plans for 99 vessel “loop”

Not so fast...

- POLLUTION!
- Many diesel engines are older, less technologically advanced
- Among marine vessels, ferries contribute 19% of all NO_x and 12% of PM, most of which is $\text{PM}_{2.5}$
- More NO_x 's and PM per passenger mile than if riders drove!

Emissions Inventory

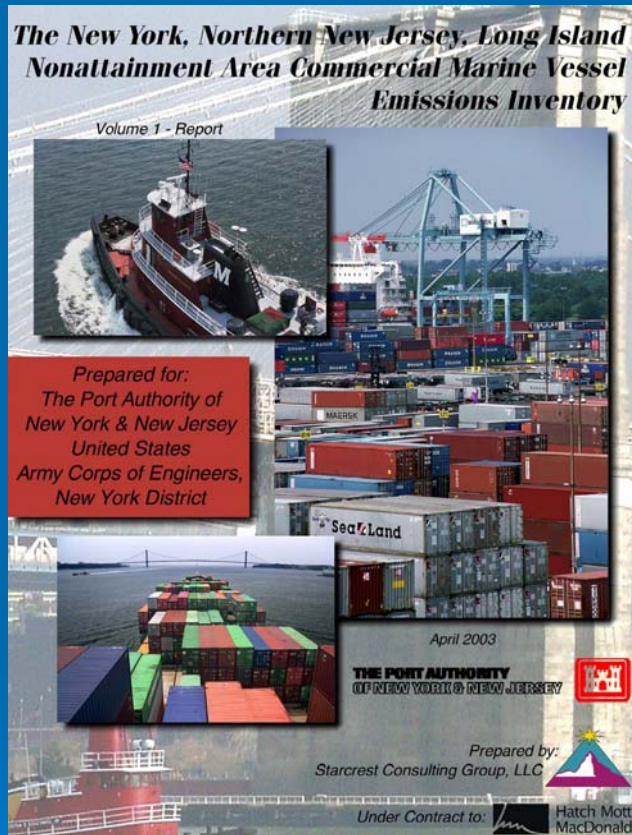
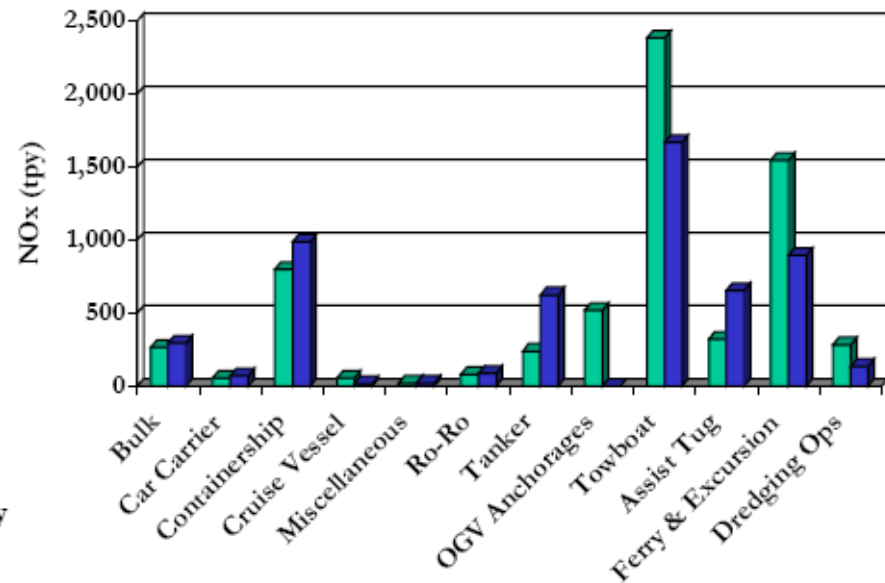


Figure 4.3: 2000 CMV NOx Emissions by Vessel Type, by State



NY/NJ addressing the issue...

- Previously unregulated
- Inventory
- Emissions Reduction Program
 - 4 Private companies
 - Baseline complete
 - Identifying best practices
- Variety of economic incentives might work

Conclusion



- As long as environmental issues are addressed, water transit might be New York's solution to gridlock.
- What would you rather look at?