# APPENDIX 9

## Waterborne Commodity Flow Tables

## INBOUND WATERBORNE CARGO FLOWS by REGION/STATE, DESTINATION and COMMODITY, 2024-2050

*Source: USDOT/BTS Freight Analysis Framework ver. 5.7.1*

| ORIGIN by REGION/STATE | STATE OF ENTRY | DOMESTIC DESTINATION | COMMODITY | Tonnage (thousands of tons) | | Pct. Change |
|---|---|---|---|---|---|---|
| | | | | *2024* | *2050* | |
| 801-Canada | All US States Combined | 42-Pennsylvania | All Commodities Combined | 29.415 | 5,043.019 | 17044.7% |
| 802-Mexico | All US States Combined | 42-Pennsylvania | All Commodities Combined | 193.136 | 573.377 | 196.9% |
| 803-Rest of Americas | All US States Combined | 42-Pennsylvania | All Commodities Combined | 2,617.561 | 3,575.196 | 36.6% |
| 804-Europe | All US States Combined | 42-Pennsylvania | All Commodities Combined | 4,596.623 | 11,436.865 | 148.8% |
| 805-Africa | All US States Combined | 42-Pennsylvania | All Commodities Combined | 999.461 | 5,054.513 | 405.7% |
| 806-SW & Central Asia | All US States Combined | 42-Pennsylvania | All Commodities Combined | 1,199.576 | 1,719.096 | 43.3% |
| 807-Eastern Asia | All US States Combined | 42-Pennsylvania | All Commodities Combined | 3,741.758 | 5,553.697 | 48.4% |
| 808-SE Asia & Oceania | All US States Combined | 42-Pennsylvania | All Commodities Combined | 1,543.773 | 1,842.259 | 19.3% |
| 801-Canada | 42-Pennsylvania | All US States Combined | All Commodities Combined | 155.624 | 5,214.464 | 3250.7% |
| 802-Mexico | 42-Pennsylvania | All US States Combined | All Commodities Combined | 209.545 | 907.335 | 333.0% |
| 803-Rest of Americas | 42-Pennsylvania | All US States Combined | All Commodities Combined | 3,728.468 | 9,048.211 | 142.7% |
| 804-Europe | 42-Pennsylvania | All US States Combined | All Commodities Combined | 3,951.916 | 12,129.475 | 206.9% |
| 805-Africa | 42-Pennsylvania | All US States Combined | All Commodities Combined | 987.127 | 4,848.534 | 391.2% |
| 806-SW & Central Asia | 42-Pennsylvania | All US States Combined | All Commodities Combined | 867.908 | 3,162.645 | 264.4% |
| 807-Eastern Asia | 42-Pennsylvania | All US States Combined | All Commodities Combined | 1,150.232 | 2,168.039 | 88.5% |
| 808-SE Asia & Oceania | 42-Pennsylvania | All US States Combined | All Commodities Combined | 961.827 | 2,239.489 | 132.8% |
| 801-Canada | 42-Pennsylvania | 42-Pennsylvania | All Commodities Combined | 19.601 | 4,400.779 | 22351.9% |
| 802-Mexico | 42-Pennsylvania | 42-Pennsylvania | All Commodities Combined | 77.647 | 492.289 | 534.0% |
| 803-Rest of Americas | 42-Pennsylvania | 42-Pennsylvania | All Commodities Combined | 1,375.225 | 2,430.150 | 76.7% |
| 804-Europe | 42-Pennsylvania | 42-Pennsylvania | All Commodities Combined | 1,710.247 | 8,952.625 | 423.5% |
| 805-Africa | 42-Pennsylvania | 42-Pennsylvania | All Commodities Combined | 677.687 | 4,447.069 | 556.2% |
| 806-SW & Central Asia | 42-Pennsylvania | 42-Pennsylvania | All Commodities Combined | 252.595 | 707.003 | 179.9% |
| 807-Eastern Asia | 42-Pennsylvania | 42-Pennsylvania | All Commodities Combined | 1,021.964 | 1,278.682 | 25.1% |
| 808-SE Asia & Oceania | 42-Pennsylvania | 42-Pennsylvania | All Commodities Combined | 483.498 | 938.458 | 94.1% |
| 12-Florida | N/A | 42-Pennsylvania | 16-Crude petroleum | 21.379 | 31.064 | 45.3% |
| 18-Indiana | N/A | 42-Pennsylvania | 12-Gravel | 222.435 | 217.350 | -2.3% |
| 22-Louisiana | N/A | 42-Pennsylvania | 13-Nonmetallic minerals | 95.331 | 125.809 | 32.0% |
| 26-Michigan | N/A | 42-Pennsylvania | 12-Gravel | 0.114 | 0.159 | 39.4% |
| 26-Michigan | N/A | 42-Pennsylvania | 41-Waste/scrap | 338.654 | 406.893 | 20.2% |
| 34-New Jersey | N/A | 42-Pennsylvania | 19-Natural gas and other fossil products | 404.552 | 809.327 | 100.1% |
| 39-Ohio | N/A | 42-Pennsylvania | 15-Coal | 1,369.245 | 200.009 | -85.4% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 07-Other foodstuffs | 1.021 | 1.539 | 50.7% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 11-Natural sands | 542.524 | 773.359 | 42.5% |

## INBOUND WATERBORNE CARGO FLOWS by REGION/STATE, DESTINATION and COMMODITY, 2024-2050

*Source: USDOT/BTS Freight Analysis Framework ver. 5.7.1*

| ORIGIN by REGION/STATE | STATE OF ENTRY | DOMESTIC DESTINATION | COMMODITY | Tonnage (thousands of tons) | | Pct. Change |
|---|---|---|---|---|---|---|
| | | | | *2024* | *2050* | |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 12-Gravel | 867.790 | 1,396.976 | 61.0% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 15-Coal | 0.050 | 0.007 | -87.0% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 16-Crude petroleum | 80.190 | 77.237 | -3.7% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 17-Gasoline | 1,135.856 | 924.036 | -18.6% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 18-Fuel oils | 281.274 | 319.484 | 13.6% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 19-Natural gas and other fossil products | 0.018 | 0.045 | 152.0% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 33-Articles-base metal | 12.765 | 21.273 | 66.7% |
| 48-Texas | N/A | 42-Pennsylvania | 16-Crude petroleum | 978.990 | 724.648 | -26.0% |
| 48-Texas | N/A | 42-Pennsylvania | 19-Natural gas and other fossil products | 151.893 | 358.418 | 136.0% |
| 48-Texas | N/A | 42-Pennsylvania | 20-Basic chemicals | 0.244 | 0.798 | 227.9% |
| 54-West Virginia | N/A | 42-Pennsylvania | 15-Coal | 13,136.484 | 1,215.976 | -90.7% |
| 54-West Virginia | N/A | 42-Pennsylvania | 18-Fuel oils | 0.001 | 0.001 | 57.1% |

## OUTBOUND WATERBORNE CARGO FLOWS by REGION/STATE, DESTINATION and COMMODITY, 2024-2050

*Source: USDOT/BTS Freight Analysis Framework ver. 5.7.1*

| ORIGIN by REGION/STATE | STATE OF EXPORT | FOREIGN DESTINATION | COMMODITY | Tonnage (thousands of tons) | | Pct. Change |
|---|---|---|---|---|---|---|
| | | | | *2024* | *2050* | |
| 42-Pennsylvania | All US States Combined | 801-Canada | All Commodities Combined | 2,617.135 | 364.971 | -86.1% |
| 42-Pennsylvania | All US States Combined | 802-Mexico | All Commodities Combined | 20.586 | 227.935 | 1007.2% |
| 42-Pennsylvania | All US States Combined | 803-Rest of Americas | All Commodities Combined | 3,189.109 | 7,495.404 | 135.0% |
| 42-Pennsylvania | All US States Combined | 804-Europe | All Commodities Combined | 6,608.549 | 7,881.616 | 19.3% |
| 42-Pennsylvania | All US States Combined | 805-Africa | All Commodities Combined | 1,322.243 | 1,213.919 | -8.2% |
| 42-Pennsylvania | All US States Combined | 806-SW & Central Asia | All Commodities Combined | 6,922.663 | 4,634.734 | -33.0% |
| 42-Pennsylvania | All US States Combined | 807-Eastern Asia | All Commodities Combined | 8,004.893 | 8,593.754 | 7.4% |
| 42-Pennsylvania | All US States Combined | 808-SE Asia & Oceania | All Commodities Combined | 1,047.824 | 1,144.340 | 9.2% |
| All US States Combined | 42-Pennsylvania | 801-Canada | All Commodities Combined | 64.183 | 64.069 | -0.2% |
| All US States Combined | 42-Pennsylvania | 802-Mexico | All Commodities Combined | 16.527 | 168.236 | 918.0% |
| All US States Combined | 42-Pennsylvania | 803-Rest of Americas | All Commodities Combined | 1,047.672 | 2,753.934 | 162.9% |
| All US States Combined | 42-Pennsylvania | 804-Europe | All Commodities Combined | 5,541.940 | 4,900.149 | -11.6% |
| All US States Combined | 42-Pennsylvania | 805-Africa | All Commodities Combined | 501.198 | 832.396 | 66.1% |
| All US States Combined | 42-Pennsylvania | 806-SW & Central Asia | All Commodities Combined | 445.063 | 3,526.235 | 692.3% |
| All US States Combined | 42-Pennsylvania | 807-Eastern Asia | All Commodities Combined | 1,046.494 | 325.249 | -68.9% |
| All US States Combined | 42-Pennsylvania | 808-SE Asia & Oceania | All Commodities Combined | 596.609 | 1,562.987 | 162.0% |
| 42-Pennsylvania | 42-Pennsylvania | 801-Canada | All Commodities Combined | 32.765 | 0.037 | -99.9% |
| 42-Pennsylvania | 42-Pennsylvania | 802-Mexico | All Commodities Combined | 15.345 | 134.847 | 778.8% |
| 42-Pennsylvania | 42-Pennsylvania | 803-Rest of Americas | All Commodities Combined | 610.640 | 1,148.763 | 88.1% |
| 42-Pennsylvania | 42-Pennsylvania | 804-Europe | All Commodities Combined | 3,949.645 | 4,207.222 | 6.5% |
| 42-Pennsylvania | 42-Pennsylvania | 805-Africa | All Commodities Combined | 321.202 | 736.887 | 129.4% |
| 42-Pennsylvania | 42-Pennsylvania | 806-SW & Central Asia | All Commodities Combined | 394.912 | 1,468.929 | 272.0% |
| 42-Pennsylvania | 42-Pennsylvania | 807-Eastern Asia | All Commodities Combined | 987.799 | 323.837 | -67.2% |
| 42-Pennsylvania | 42-Pennsylvania | 808-SE Asia & Oceania | All Commodities Combined | 193.904 | 697.318 | 259.6% |
| 42-Pennsylvania | N/A | 10-Delaware | 16-Crude petroleum | 29.221 | 27.835 | -4.7% |
| 42-Pennsylvania | N/A | 17-Illinois | 32-Base metals | 20.566 | 24.085 | 17.1% |
| 42-Pennsylvania | N/A | 21-Kentucky | 41-Waste/scrap | 306.348 | 249.299 | -18.6% |
| 42-Pennsylvania | N/A | 24-Maryland | 20-Basic chemicals | 0.002 | 0.006 | 243.8% |
| 42-Pennsylvania | N/A | 29-Missouri | 32-Base metals | 5.318 | 5.738 | 7.9% |
| 42-Pennsylvania | N/A | 34-New Jersey | 18-Fuel oils | 1,149.724 | 1,592.140 | 38.5% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 07-Other foodstuffs | 1.021 | 1.539 | 50.7% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 11-Natural sands | 542.524 | 773.359 | 42.5% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 12-Gravel | 867.790 | 1,396.976 | 61.0% |

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|---|---|---|---|---|---|---|
| | | | | *2024* | *2050* | |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 15-Coal | 0.050 | 0.007 | -87.0% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 16-Crude petroleum | 80.190 | 77.237 | -3.7% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 17-Gasoline | 1,135.856 | 924.036 | -18.6% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 18-Fuel oils | 281.274 | 319.484 | 13.6% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 19-Natural gas and other fossil products | 0.018 | 0.045 | 152.0% |
| 42-Pennsylvania | N/A | 42-Pennsylvania | 33-Articles-base metal | 12.765 | 21.273 | 66.7% |
| 42-Pennsylvania | N/A | 47-Tennessee | 16-Crude petroleum | 60.221 | 24.415 | -59.5% |
| 42-Pennsylvania | N/A | 48-Texas | 20-Basic chemicals | 0.076 | 0.259 | 243.6% |