



2014 NYC In-Season Cycling Indicator

An Estimate of Trends in Regular Cycling for Transportation

Estimating trends in regular bicycle use in NYC requires the field collection of bicycle volume data, as there are few robust sources of survey data available. The replacement of the long form of the decennial U.S. Census with the American Community Survey – which has a much lower sample size and is not strictly comparable with earlier Census surveys – has exacerbated this knowledge gap. This source omits regular non-work trips, and does not accurately count work trips made by commuters who use multiple modes, such as commuters who commute by subway 3 days a week and by bicycle 2 days a week. DOT has developed an indicator that makes use of the most robust data available to estimate levels of cycling within the relatively central areas of the city over time.

In 1985, DOT began conducting an annual 12 hour manual count of cyclists on a single weekday of the year with no precipitation. The count captured cyclists crossing the four East River bridges, entering and exiting the Staten Island Ferry at the Whitehall Terminal and each avenue and the Hudson River Greenway at 50th Street. This count is the most robust, long-term count in NYC and is the basis of the NYC In-Season Cycling Indicator, however it was conducted only once per year.

In 2007, DOT began conducting these counts three times per year. Beginning in 2008, DOT expanded to 7 counts, plus 3 additional counts in May, August and September for a total of 10 counts per year conducted during the cycling season. Starting in April 2014, automated loop induction counters were used on the East River Bridges replacing manual counts by human enumerators. Automated counts have the benefit of providing continuous and more robust data throughout the year. To best equate the automated count data with historical data, each monthly count consists of average daily volume for every non-holiday weekday without precipitation. A typical monthly count now consists of between 11 and 17 days of data, versus 1 to 2 days of data in the previous system.

The historic data is adapted and blended with more robust current counts to become an indicator via the following methods:

1. Adjust for Daily Variations of Counts

The introduction in 2014 of Loop Induction Counters permits DOT to conduct continuous, daily counts on the East River Bridges without the use of human surveyors. Automated counters reduce the variability found in single counts by averaging each weekday in the month with no precipitation into a single average, excluding holidays. For the 2014 In-Season Cycling Indicator, this resulted in collection of ridership data over 93 days as compared to the 10 days of data collection conducted each year since 2008.¹ The automated counters are periodically validated by human observers who determine that the counters are correctly tallying the number of cyclists.

(1) Monthly totals include 12 count days in April, 13 count days in May, 12 count days in June, 11 count days in July, 15 count days in August, 17 count days in September, and 13 count days in October.



2. Index Count to Base 100 for Year 2000

Since the count is not a count of all cyclists in New York City, it is important that it be clear that the indicator is the best estimate of trends in cycling levels in the City over time. Thus, rather than presenting the number of cyclists counted, an index is created using the year 2000 as a baseline. All values for each year have been divided by the value for the year 2000 and multiplied by 100. Indexing the year 2000 to 100 allows for simple comparisons between values.

Indicator Results

Despite the conservative removal of the westerly avenues from the indicator in 2001 and the introduction of automated counters in 2014, the indicator shows consistent growth in regular cycling in New York City.

NYC In-Season Cycling Indicator for Selected Years

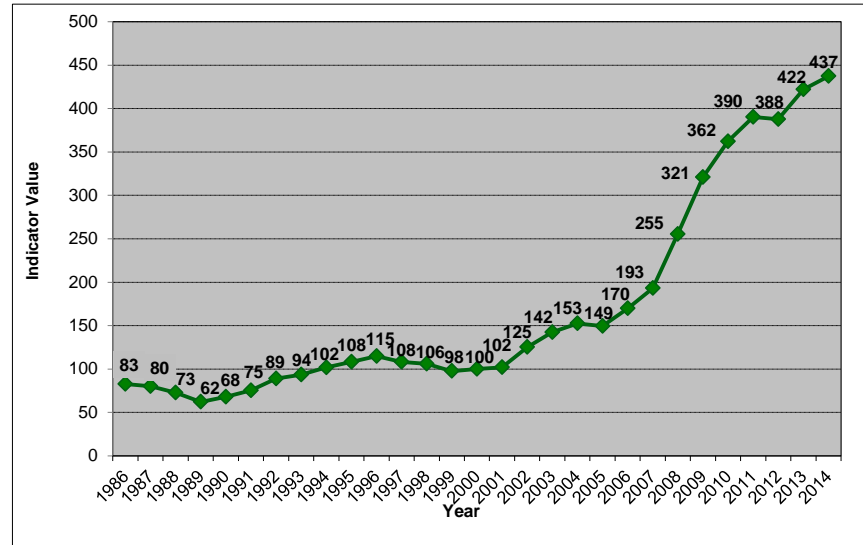
| Year | Indicator |
|------|-----------|
| 1986 | 83 |
| | |
| 1990 | 68 |
| 1995 | 108 |
| 2000 | 100 |
| 2005 | 159 |
| | |
| 2006 | 173 |
| 2007 | 193 |
| 2008 | 255 |
| 2009 | 321 |
| 2010 | 362 |
| 2011 | 390 |
| 2012 | 388 |
| 2013 | 422 |
| 2014 | 437 |

NYC In-Season Cycling Indicator

Based on Counts at Selected Commuter Locations

Indexed to Year 2000 = 100

| Year | Value for Indicator | Index of Value for Indicator: 100 for Yr 2000 | Year to Year Growth (% Change) | Year to Year Growth (Cyclists Counted) |
|------|---------------------|-----------------------------------------------|--------------------------------|----------------------------------------|
| 1986 | 3,997 | 83 | n/a | n/a |
| 1987 | 3,867 | 80 | -3% | -130 |
| 1988 | 3,513 | 73 | -9% | -354 |
| 1989 | 3,005 | 62 | -14% | -508 |
| 1990 | 3,277 | 68 | 9% | 272 |
| 1991 | 3,645 | 75 | 11% | 368 |
| 1992 | 4,294 | 89 | 18% | 649 |
| 1993 | 4,518 | 94 | 5% | 224 |
| 1994 | 4,918 | 102 | 9% | 400 |
| 1995 | 5,229 | 108 | 6% | 311 |
| 1996 | 5,551 | 115 | 6% | 322 |
| 1997 | 5,229 | 108 | -6% | -322 |
| 1998 | 5,114 | 106 | -2% | -115 |
| 1999 | 4,716 | 98 | -8% | -398 |
| 2000 | 4,829 | 100 | 2% | 113 |
| 2001 | 4,927 | 102 | 2% | 98 |
| 2002 | 6,046 | 125 | 23% | 1,119 |
| 2003 | 6,879 | 142 | 14% | 834 |
| 2004 | 7,366 | 153 | 7% | 486 |
| 2005 | 7,215 | 149 | -2% | -151 |
| 2006 | 8,208 | 170 | 14% | 993 |
| 2007 | 9,327 | 193 | 14% | 1,118 |
| 2008 | 12,328 | 255 | 32% | 3,001 |
| 2009 | 15,495 | 321 | 26% | 3,167 |
| 2010 | 17,491 | 362 | 13% | 1,996 |
| 2011 | 18,846 | 390 | 8% | 1,356 |
| 2012 | 18,717 | 388 | -1% | -129 |
| 2013 | 20,372 | 422 | 9% | 1,654 |
| 2014 | 21,112 | 437 | 4% | 740 |



Notes:

1. Value for Indicator comes from weekday 12 hour (7am-7pm) counts at 6 key NYC locations
2. From 1985 until 2006, this count was taken only once per year. Due to volatility the "Value for Indicator" in this period is the average of the current year's count and the count of the prior and subsequent years
3. The value for 2007 is the average of 3 counts taken in May, August & September
4. The values for 2008-2011 and 2013-2014 are the averages of 10 counts taken between April and October
5. The value for 2012 is the average of 10 counts taken between May and October
6. Counts on the East River Bridges in 2014 (not including Brooklyn Bridge counts in September and October, which were collected by human surveyors) are averages of counts by automated loop induction counters on weekdays with no precipitation and exclude holidays.



Bicycle Program

**New York City Cyclist Counts At Selected Commuter Locations
12-Hour Weekday Counts, 7am to 7pm**

| Count | Facility | | | | | | Grand Total |
|-------------|---------------------|-----------------|------------------|---------------------|---------------------------|-----------------------------------|-------------|
| | Staten Island Ferry | Brooklyn Bridge | Manhattan Bridge | Williamsburg Bridge | Ed Koch Queensboro Bridge | Hudson River Greenway at 50th St. | |
| 1980 | 207 | 623 | N/A | 146 | 344 | 761 | 2,081 |
| 1985 | 231 | 913 | N/A | 392 | 759 | 1,145 | 3,440 |
| 1986 | 224 | 1,542 | N/A | 420 | 780 | 1,256 | 4,222 |
| 1987 | 327 | 1,633 | N/A | 368 | 436 | 1,565 | 4,329 |
| 1988 | 244 | 988 | N/A | 282 | 330 | 1,206 | 3,050 |
| 1989 | 202 | 890 | N/A | 240 | 423 | 1,606 | 3,161 |
| 1990 | 170 | 1,075 | N/A | 248 | 227 | 1,054 | 2,804 |
| 1991 | 341 | 1,183 | N/A | N/A | 602 | 1,741 | 3,867 |
| 1992 | 290 | 1,073 | N/A | 362 | 737 | 1,802 | 4,264 |
| 1993 | 293 | 1,193 | N/A | 361 | 709 | 2,196 | 4,752 |
| 1994 | 241 | 1,305 | N/A | 439 | 672 | 1,881 | 4,538 |
| 1995 | 386 | 1,715 | N/A | 664 | 964 | 1,736 | 5,465 |
| 1996 | 387 | 1,613 | N/A | 791 | 1,314 | 1,579 | 5,684 |
| 1997 | 318 | 1,698 | N/A | 1,022 | 786 | 1,679 | 5,503 |
| 1998 | 335 | 1,115 | N/A | 966 | 692 | 1,392 | 4,500 |
| 1999 | 366 | 1,109 | N/A | 1,004 | 820 | 2,039 | 5,338 |
| 2000 | 389 | 762 | N/A | 733 | 546 | 1,880 | 4,310 |
| 2001 | 253 | 867 | 147 | 792 | 667 | 2,113 | 4,839 |
| 2002 | 104 | 981 | 546 | 1,117 | 517 | 2,366 | 5,631 |
| 2003 | 354 | 1,049 | 661 | 1,387 | 1,331 | 2,885 | 7,667 |
| 2004 | 303 | 1,422 | 856 | 974 | 1,099 | 2,686 | 7,340 |
| 2005 | 290 | 1,349 | 829 | 1,609 | 976 | 2,037 | 7,090 |
| 2006 | 105 | 1,284 | 1,578 | 2,566 | 1,158 | 1,958 | 8,649 |
| 2007 (avg.) | 252 | 1,626 | 1,313 | 2,257 | 1,292 | 2,586 | 9,327 |
| May | 341 | 1,574 | 1,280 | 1,644 | 1,100 | 2,404 | 8,343 |
| August | 266 | 1,689 | 1,522 | 2,284 | 1,244 | 2,392 | 9,397 |
| September | 149 | 1,616 | 1,137 | 2,842 | 1,533 | 2,963 | 10,240 |
| 2008 (avg.) | 235 | 1,688 | 2,210 | 2,903 | 1,891 | 3,400 | 12,328 |
| April | 153 | 1,325 | 2,058 | 2,855 | 1,538 | 2,795 | 10,724 |
| May | 194 | 1,776 | 2,960 | 2,840 | 2,116 | 1,880 | 11,766 |
| May* | 188 | 1,728 | 2,609 | 2,743 | 2,001 | 2,384 | 11,653 |
| June | 132 | 1,638 | 2,557 | 2,931 | 1,704 | 3,276 | 12,238 |
| July | 212 | 1,594 | 1,955 | 2,884 | 2,194 | 3,666 | 12,505 |
| August | 318 | 1,642 | 2,073 | 3,021 | 2,116 | 4,185 | 13,355 |
| August* | 373 | 1,781 | 2,127 | 2,864 | 1,836 | 4,581 | 13,562 |
| September | 269 | 1,991 | 2,302 | 3,081 | 2,092 | 4,040 | 13,775 |
| September* | 312 | 1,892 | 1,960 | 3,397 | 1,377 | 3,597 | 12,535 |
| October | 203 | 1,512 | 1,497 | 2,416 | 1,940 | 3,599 | 11,167 |
| 2009 (avg.) | 256 | 2,294 | 2,606 | 3,823 | 2,225 | 4,289 | 15,495 |
| April | 185 | 1,585 | 1,828 | 3,202 | 1,660 | 2,309 | 10,769 |
| May | 209 | 2,601 | 2,371 | 3,420 | 1,751 | 3,840 | 14,192 |
| May* | 143 | 1,845 | 2,385 | 3,423 | 1,676 | 3,287 | 12,759 |
| June | 161 | 2,504 | 2,245 | 3,802 | 2,396 | 4,426 | 15,534 |
| July | 339 | 2,943 | 2,624 | 4,200 | 2,963 | 4,329 | 17,396 |
| August* | 309 | 2,376 | 2,365 | 3,966 | 2,423 | 5,520 | 16,959 |
| August | 345 | 2,505 | 3,821 | 3,941 | 2,641 | 4,970 | 18,223 |
| September* | 332 | 2,172 | 2,683 | 4,330 | 2,556 | 5,440 | 17,513 |
| September | 272 | 1,930 | 2,778 | 4,038 | 2,016 | 4,419 | 15,453 |
| October | 268 | 2,479 | 2,962 | 3,911 | 2,172 | 4,354 | 16,146 |
| 2010 (avg.) | 378 | 2,153 | 2,984 | 4,296 | 2,626 | 5,055 | 17,491 |
| April | 356 | 2,062 | 2,404 | 3,909 | 2,235 | 4,452 | 15,418 |
| May | 403 | 2,466 | 3,453 | 4,076 | 2,574 | 6,190 | 19,162 |
| May* | 354 | 2,212 | 2,929 | 3,934 | 2,173 | 3,985 | 15,587 |
| June | 237 | 1,376 | 2,407 | 3,845 | 2,590 | 5,230 | 15,685 |
| July | 427 | 2,104 | 2,646 | 3,891 | 2,020 | 4,213 | 15,301 |
| August* | 284 | 2,528 | 2,771 | 5,110 | 3,070 | 6,372 | 20,135 |
| August | 492 | 2,306 | 2,990 | 4,866 | 3,035 | 5,055 | 18,744 |
| September | 403 | 1,938 | 3,402 | 4,408 | 3,355 | 5,125 | 18,631 |
| September* | 399 | 2,683 | 3,366 | 4,693 | 2,619 | 5,629 | 19,389 |
| October | 427 | 1,853 | 3,467 | 4,226 | 2,586 | 4,294 | 16,853 |
| 2011 (avg.) | 368 | 2,322 | 3,617 | 4,515 | 2,904 | 5,120 | 18,846 |
| April | 436 | 2,630 | 2,714 | 4,612 | 2,443 | 5,161 | 17,996 |
| May | 295 | 2,463 | 4,207 | 4,215 | 2,528 | 5,262 | 18,970 |
| May* | 365 | 2,698 | 4,286 | 4,264 | 2,164 | 6,267 | 19,014 |
| June | 418 | 2,145 | 3,954 | 4,709 | 2,467 | 5,561 | 19,254 |
| July | 445 | 2,104 | 3,648 | 4,614 | 2,624 | 4,876 | 18,311 |
| August | 381 | 2,755 | 3,696 | 5,007 | 3,558 | 6,032 | 21,429 |
| August* | 346 | 2,514 | 3,067 | 4,479 | 3,433 | 5,486 | 19,325 |
| September | 308 | 2,217 | 3,326 | 4,402 | 3,311 | 4,300 | 17,864 |
| September* | 386 | 1,896 | 3,849 | 4,235 | 3,333 | 5,676 | 19,375 |
| October | 296 | 1,830 | 3,425 | 4,614 | 3,182 | 3,578 | 16,925 |
| 2012 (avg.) | 250 | 2,297 | 3,770 | 4,488 | 2,638 | 5,273 | 18,717 |
| May*- | 146 | 1,573 | 3,017 | 3,546 | 2,199 | 5,573 | 16,054 |
| May (A) | 134 | 2,111 | 4,215 | 4,089 | 2,397 | 4,747 | 17,693 |
| May (B) | 162 | 2,150 | 3,851 | 4,817 | 2,311 | 6,191 | 19,482 |
| June | 355 | 2,788 | 3,955 | 3,888 | 2,693 | 5,272 | 18,731 |
| July | 325 | 2,760 | 4,182 | 5,176 | 2,744 | 4,879 | 20,066 |
| August | 379 | 2,852 | 3,993 | 5,091 | 3,330 | 6,231 | 21,876 |
| August* | 384 | 2,568 | 3,749 | 4,745 | 3,416 | 6,170 | 21,032 |
| September | 219 | 1,931 | 3,730 | 5,157 | 2,687 | 5,452 | 19,176 |
| September* | 174 | 2,022 | 3,837 | 4,560 | 2,535 | 4,622 | 17,750 |
| October | 226 | 2,239 | 3,174 | 4,006 | 2,071 | 3,596 | 15,312 |
| 2013 (avg.) | 262 | 2,684 | 4,173 | 5,288 | 2,843 | 5,122 | 20,372 |
| April | 288 | 1,615 | 3,130 | 4,317 | 3,001 | 2,559 | 14,910 |
| May | 326 | 2,587 | 4,208 | 5,335 | 2,897 | 5,254 | 20,607 |
| May* | 414 | 2,666 | 4,402 | 5,342 | 2,946 | 5,461 | 21,231 |
| June | 237 | 2,616 | 3,972 | 5,103 | 2,443 | 5,332 | 19,703 |
| July | 172 | 2,396 | 3,923 | 4,889 | 2,673 | 5,521 | 19,374 |
| August | 275 | 3,261 | 4,927 | 5,986 | 3,572 | 6,387 | 24,408 |
| August* | 297 | 3,094 | 4,644 | 5,718 | 2,178 | 6,255 | 22,186 |
| September* | 159 | 2,912 | 3,926 | 5,735 | 3,112 | 5,308 | 21,152 |
| September | 292 | 2,703 | 4,196 | 5,628 | 2,645 | 4,108 | 19,572 |
| October | 155 | 2,993 | 4,404 | 5,026 | 2,959 | 5,035 | 20,572 |
| 2014 (avg.) | 406 | 2,566 | 4,428 | 4,828 | 3,228 | 5,655 | 21,112 |
| April | 294 | 2,027 | 3,410 | 3,710 | 2,403 | 2,042 | 13,886 |
| May | 389 | 2,770 | 4,639 | 4,878 | 3,146 | 6,224 | 22,046 |
| June | 321 | 2,869 | 4,808 | 5,282 | 3,429 | 6,140 | 22,849 |
| July | 518 | 2,626 | 4,586 | 5,127 | 3,504 | 5,530 | 21,885 |
| August | 513 | 2,616 | 4,701 | 5,226 | 3,638 | 6,638 | 23,332 |
| September | 389 | 2,437 | 4,697 | 5,158 | 3,499 | 6,580 | 24,760 |
| October | 420 | 2,618 | 4,157 | 4,423 | 2,975 | 4,432 | 19,025 |

Notes:

- Count is on a single mid-summer weekday from 7am to 7pm from 1980, and 1985-2006
- There is no data available for 12th Avenue in 1986 and the Williamsburg Bridge in 1991
- The Hudson River Greenway and Manhattan Bridge path opened to cycling in 2001
- For years prior to availability of the Hudson River Greenway, data for 9th, 10th, 11th and 12th avenues are shown as a proxy
- * Count is from an additional monthly count conducted at that location
- No April count was conducted in 2012. This May count is a substitute for the April count.
- Italicized counts indicate data that was primarily automated and is an average of each month excluding holidays and days with precipitation



New York City Cyclist Counts by Year

Weekday Counts, 7am to 7pm, At Selected Commuter Locations

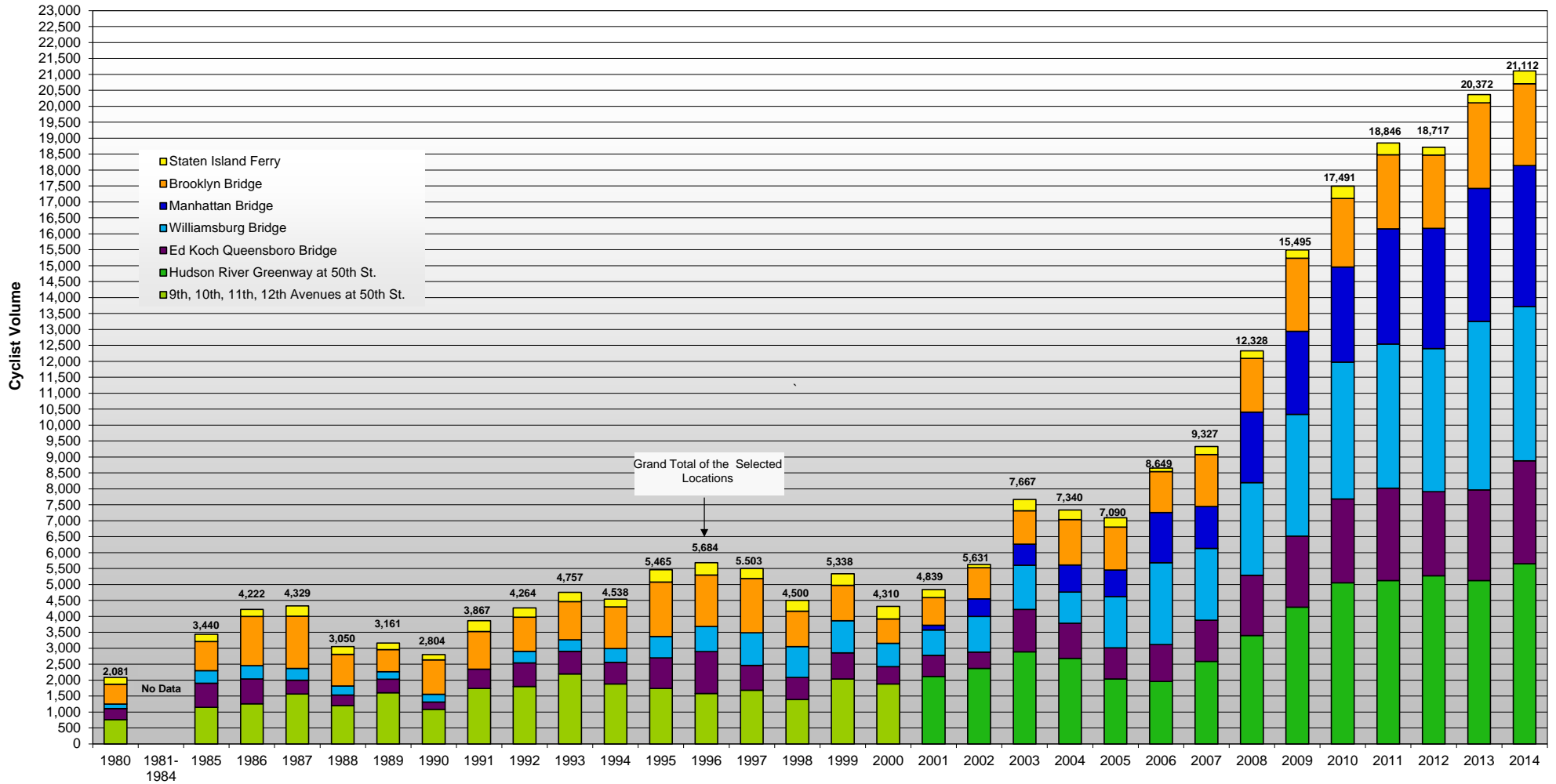
| Year | Facility | | | | | | | Grand Total | |
|-----------|---------------------|-----------------|------------------|---------------------|---------------------------|-----------------------------------|-------------------------------------------|-------------|-----|
| | Staten Island Ferry | Brooklyn Bridge | Manhattan Bridge | Williamsburg Bridge | Ed Koch Queensboro Bridge | Hudson River Greenway at 50th St. | 9th, 10th, 11th, 12th Avenues at 50th St. | | |
| 1980 | 207 | 623 | N/A. See Note | 146 | 344 | N/A. See Note | 761 | 2,081 | |
| 1981-1984 | N/A | N/A | | N/A | N/A | | N/A | N/A | N/A |
| 1985 | 231 | 913 | | 392 | 759 | | 1,145 | 3,440 | |
| 1986 | 224 | 1,542 | | 420 | 780 | | 1,256 | 4,222 | |
| 1987 | 327 | 1,633 | | 368 | 436 | | 1,565 | 4,329 | |
| 1988 | 244 | 988 | | 282 | 330 | | 1,206 | 3,050 | |
| 1989 | 202 | 690 | | 240 | 423 | | 1,606 | 3,161 | |
| 1990 | 170 | 1,075 | | 248 | 227 | | 1,084 | 2,804 | |
| 1991 | 341 | 1,183 | | N/A | 602 | | 1,741 | 3,867 | |
| 1992 | 290 | 1,073 | | 362 | 737 | | 1,802 | 4,264 | |
| 1993 | 293 | 1,193 | | 361 | 709 | | 2,196 | 4,752 | |
| 1994 | 241 | 1,305 | | 439 | 672 | | 1,881 | 4,538 | |
| 1995 | 386 | 1,715 | | 664 | 964 | | 1,736 | 5,465 | |
| 1996 | 387 | 1,613 | | 791 | 1,314 | | 1,579 | 5,684 | |
| 1997 | 318 | 1,698 | | 1,022 | 786 | | 1,679 | 5,503 | |
| 1998 | 335 | 1,115 | | 966 | 692 | | 1,392 | 4,500 | |
| 1999 | 366 | 1,109 | | 1,004 | 820 | | 2,039 | 5,338 | |
| 2000 | 389 | 762 | 733 | 546 | 1,880 | 4,310 | | | |
| 2001 | 253 | 867 | 147 | 792 | 667 | 2,113 | 4,839 | | |
| 2002 | 104 | 981 | 546 | 1,117 | 517 | 2,366 | 5,631 | | |
| 2003 | 354 | 1,049 | 661 | 1,387 | 1,331 | 2,885 | 7,667 | | |
| 2004 | 303 | 1,422 | 856 | 974 | 1,099 | 2,686 | 7,340 | | |
| 2005 | 290 | 1,349 | 829 | 1,609 | 976 | 2,037 | 7,090 | | |
| 2006 | 105 | 1,284 | 1,578 | 2,566 | 1,158 | 1,958 | 8,649 | | |
| 2007 | 252 | 1,626 | 1,313 | 2,257 | 1,292 | 2,586 | 9,327 | | |
| 2008 | 235 | 1,688 | 2,210 | 2,903 | 1,891 | 3,400 | 12,328 | | |
| 2009 | 256 | 2,294 | 2,606 | 3,823 | 2,225 | 4,289 | 15,495 | | |
| 2010 | 378 | 2,153 | 2,984 | 4,296 | 2,626 | 5,055 | 17,491 | | |
| 2011 | 368 | 2,322 | 3,617 | 4,515 | 2,904 | 5,120 | 18,846 | | |
| 2012 | 250 | 2,297 | 3,770 | 4,488 | 2,638 | 5,273 | 18,717 | | |
| 2013 | 262 | 2,684 | 4,173 | 5,288 | 2,843 | 5,122 | 20,372 | | |
| 2014 | 406 | 2,566 | 4,428 | 4,828 | 3,228 | 5,655 | 21,112 | | |

Notes:

- Count is on a single mid-summer weekday from 7am to 7pm from 1980, and 1985-2006
- There is no data available for 12th Avenue in 1986 and the Williamsburg Bridge in 1991
- The value for 2007 is the average of 3 counts taken in May, August & September
- The value for 2008-2011 and 2013 is the average of 10 counts taken between April and October
- The value for 2012 is the average of 10 counts taken between May and October
- The Hudson River Greenway and Manhattan Bridge path opened to cycling in 2001
- For years prior to availability of the Hudson River Greenway, data for 9th, 10th, 11th and 12th avenues are shown as a proxy
- Italicized counts indicate data that was primarily automated and is an average of each month excluding holidays and days with precipitation



New York City Cyclist Counts at Selected Commuter Locations Weekday, 7AM to 7PM, 1980-2014



Notes:

1. Count is on a single summer weekday from 7am to 7pm from 1980, and 1985-2006
2. There is no data available for 12th Avenue in 1986 and the Williamsburg Bridge in 1991
3. The value for 2007 is the average of 3 counts taken in May, August & September
4. The values for 2008-2011 and 2013-2014 are the averages of 10 counts taken between April and October
5. The Hudson River Greenway and Manhattan Bridge path opened to cycling in 2001
6. For years prior to availability of the Hudson River Greenway, data for 9th, 10th, 11th and 12th avenues are shown as a proxy
7. 9th through 12th Avenues is removed from the count from 2001 forward when the Hudson River Greenway enters the count
8. The value for 2012 is the average of 10 counts taken between May and October
9. Counts in 2014 include data collected by automated counters