



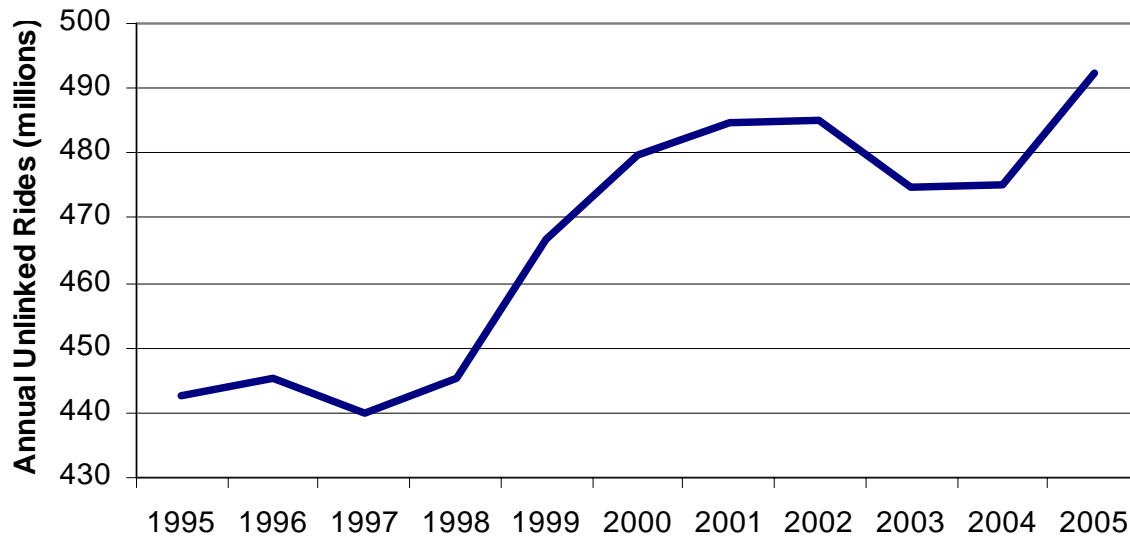
## Transit Operations

# Performance Indicators





# Ridership is the Most Important Indicator of Service Quality



- CTA ridership has increased in seven of the past eight years
- 2005 system-wide ridership increased about 4% from 2004 (5% on rail and 3% on bus)
- System ridership levels are highest in 13 years





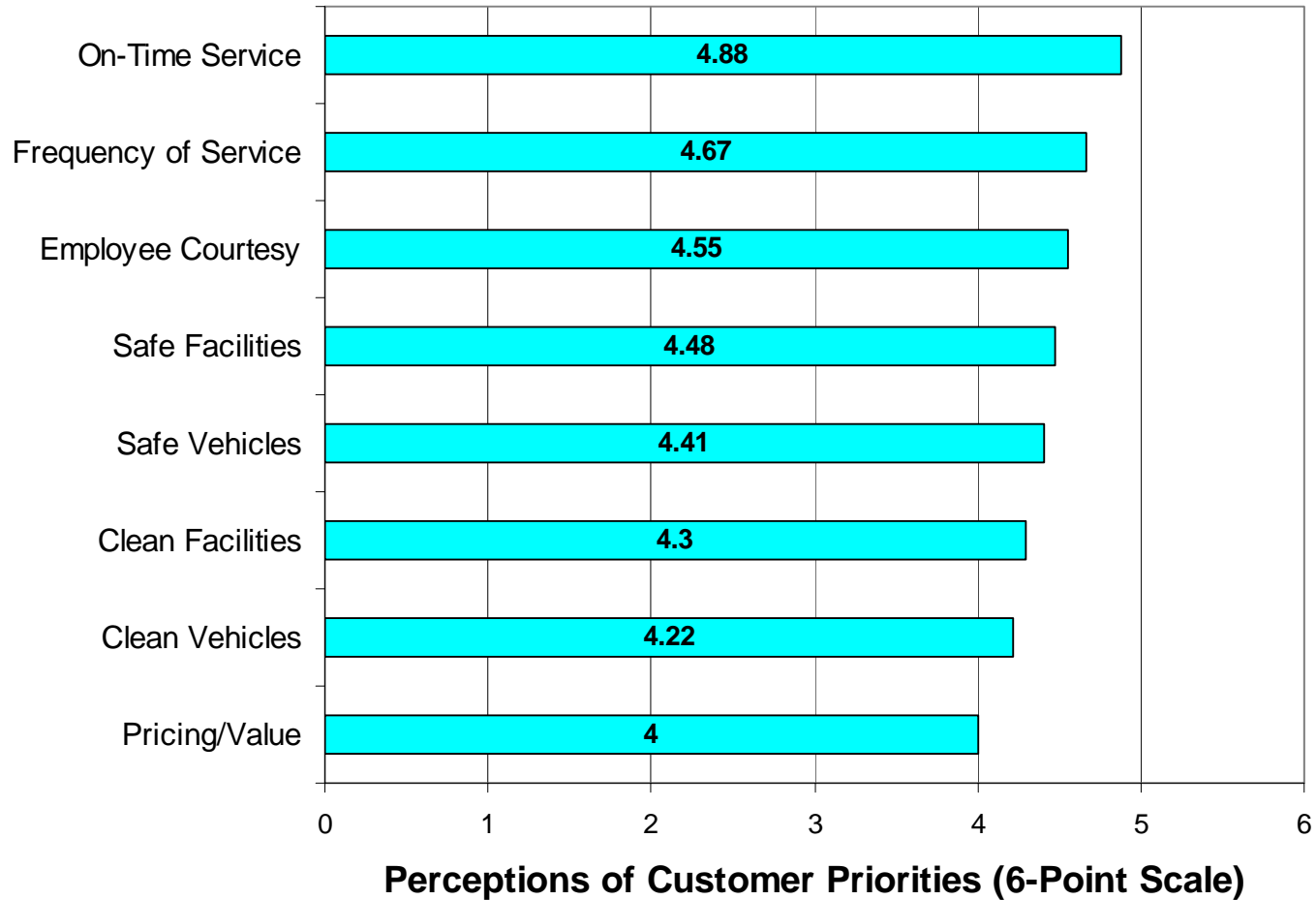
# What do CTA customers care about?

## Transit Customers Care Most About Service Reliability





# Perceptions of Customer Priorities



According to TCRP Report: *Customer-Focused Transit: A Synthesis of Transit Practice*, 2002.



## How do Customers Perceive Reliability?

- For service periods with headways **10 minutes or less:**
  - Customers expect to board service shortly after arriving at stop/station
  - In these periods, reliability means **HEADWAY CONSISTENCY**
- For service periods with headways **10 minutes or more:**
  - Customers rely on schedules to time their arrival at the stop or station to avoid long wait times
  - In these periods, reliability means **SCHEDULE ADHERENCE**





## CTA Service Reliability - Bus

- All CTA Bus Customers
  - 76% ride service with headways 10 minutes or less
  - 87% ride service with headways 12 minutes or less
  
- Weekday Rush Hour Bus Customers
  - 62% ride service with headways 7.5 minutes or less
  - 87% ride service with headways 10 minutes or less
  - 95% ride service with headways 12 minutes or less



# CTA Service Reliability - Rail

- All CTA Rail Customers
  - 87% ride service with headways 10 minutes or less
- Weekday Rush Hour Rail Customers
  - 69 % ride service with headways 5 minutes or less
  - 79 % ride service with headways 6 minutes or less
  - 91 % ride service with headways 8 minutes or less



# Purposes for Monitoring Service

- Provide accurate and timely travel information to customers
- Improve real-time transportation management to monitor service delivery 24 hours
- Improve ongoing service planning and scheduling processes







# How Does CTA Monitor Reliability?

## ■ Old System

- Field supervisors keep manual records to record schedule adherence at a few key stops
- Manual recording is labor-intensive; paper records are difficult to aggregate/analyze at a system level

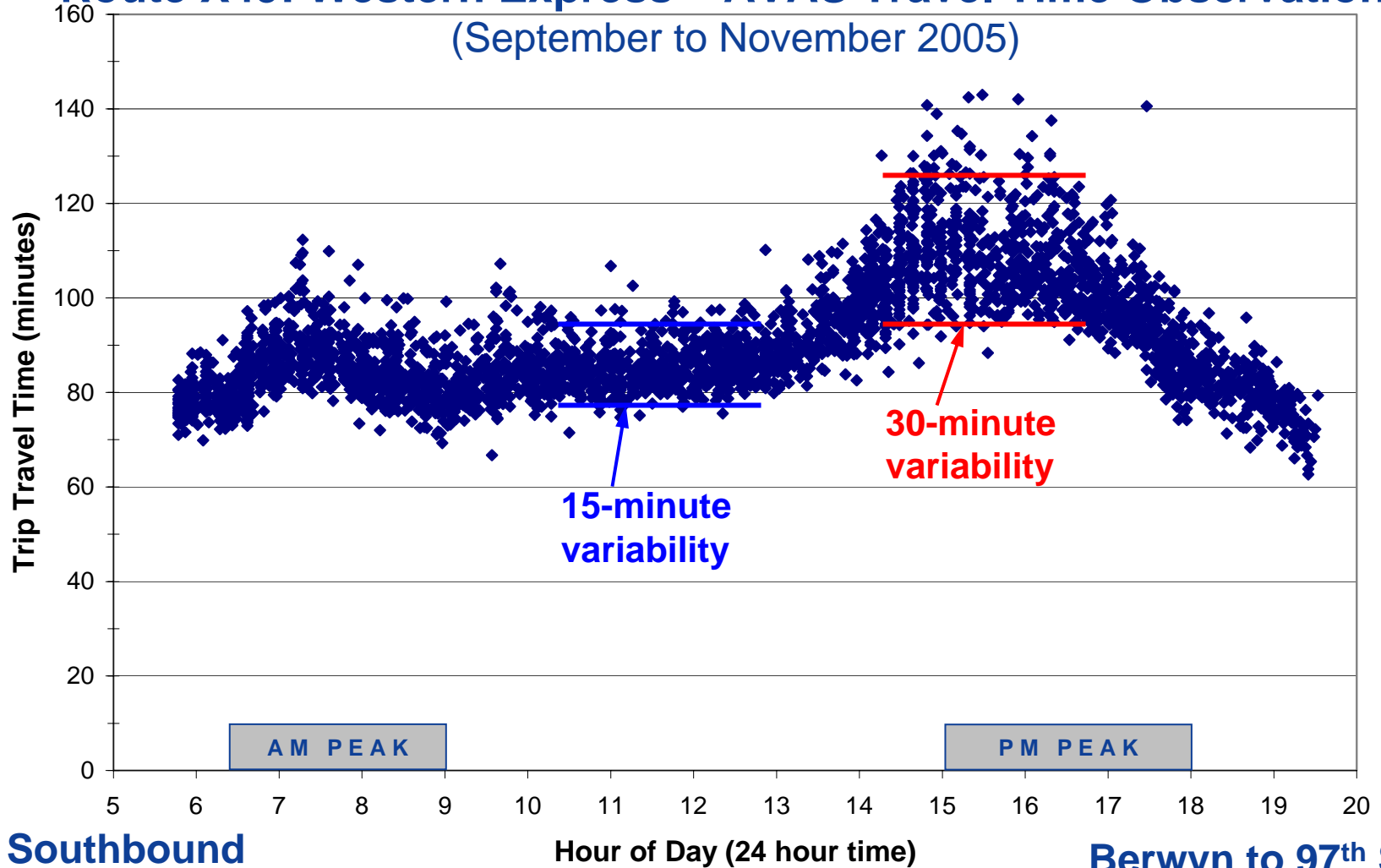
## ■ New System

- Bus service
  - For the past 16 months, CTA has collected automated departure information for every bus
  - Collected data allows monitoring of schedule adherence based on terminal departures
- Rail service
  - Fully-automated data collection will be phased in after installation of new signal systems
  - When system is operational, data will be used to monitor schedule adherence and maintain headway consistency



# Challenges to Service Reliability – Bus

## Route X49: Western Express – AVAS Travel Time Observations (September to November 2005)



Southbound

Berwyn to 97<sup>th</sup> St

◆ AVAS Trip Travel Time Observation



# Challenges to Service Reliability – Bus

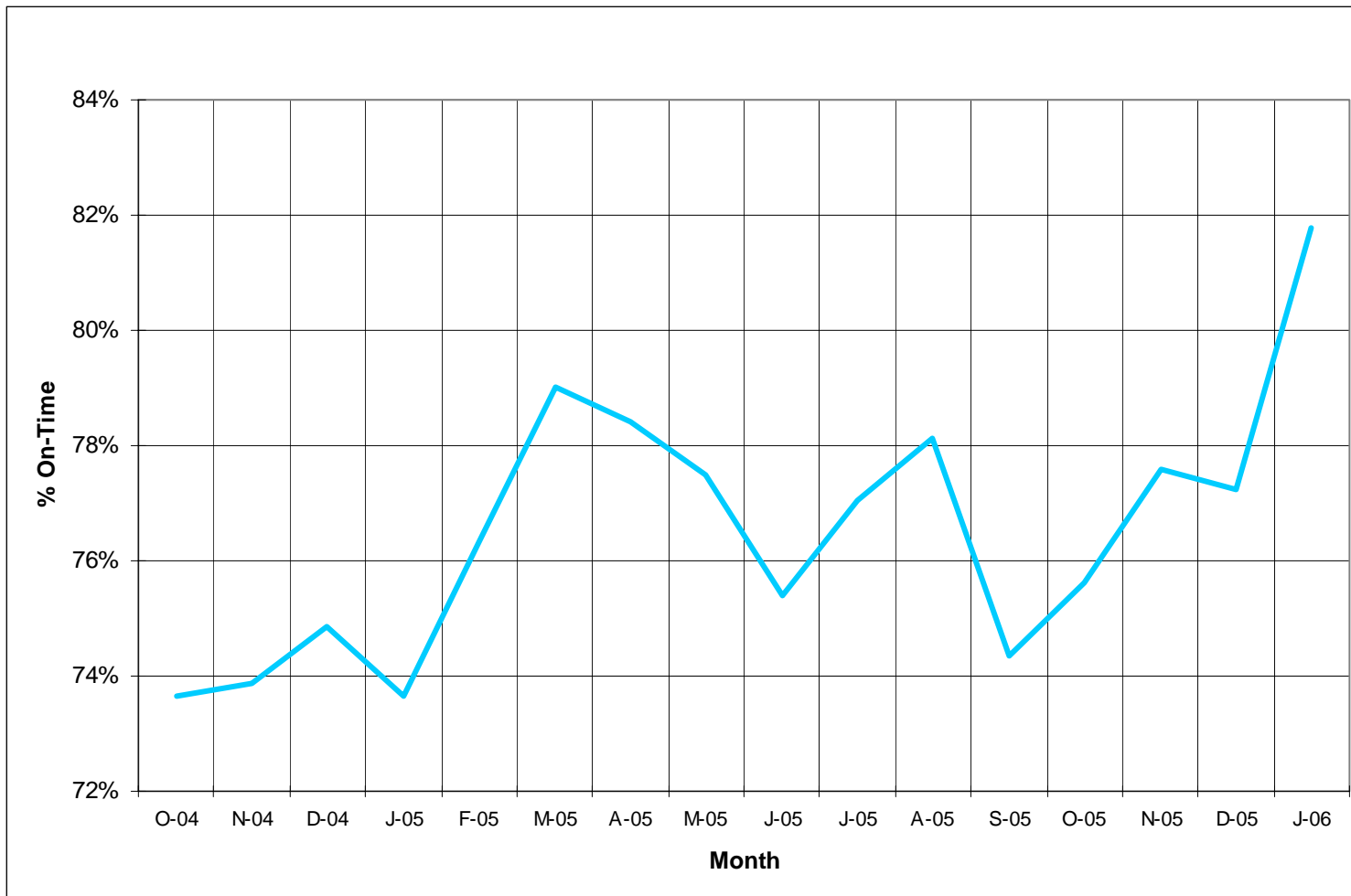
- Beyond CTA Control
  - Traffic Congestion
  - Road Construction
  - Inclement Weather
  - Traffic Signals
  - Vehicles in Bus Stops



- Within Limited CTA Control
  - Fare Collection
  - Customer Boardings
  - Operator Performance
  - Vehicle Maintenance



# Schedule Adherence – Bus



**Based on AVAS data, bus terminal departure performance increased from 74% to 82% between October 2004 and January 2006.**



## Service Reliability Initiatives - Bus

### ▪ Current

- Go Lane
- New bus procurement
- Overhaul programs
- Bus Operator Training
- MMIS
- AVM
- Terminal departure adherence (BLIS)
- AVL data to support schedule analysis
- Bus stop enforcement

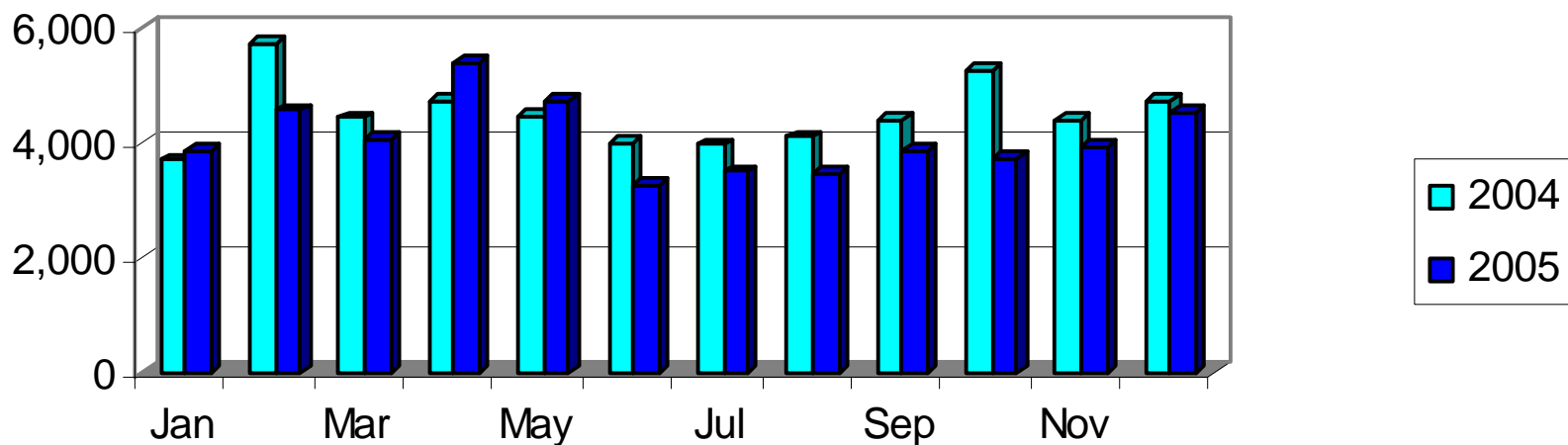
### ▪ Future

- CAD/AVL
- Bus Time
- Traffic signal priority
- Wireless supervisor handheld pilot
- Headway consistency metrics



# Vehicle Reliability - Bus

Mean Distance between Failures



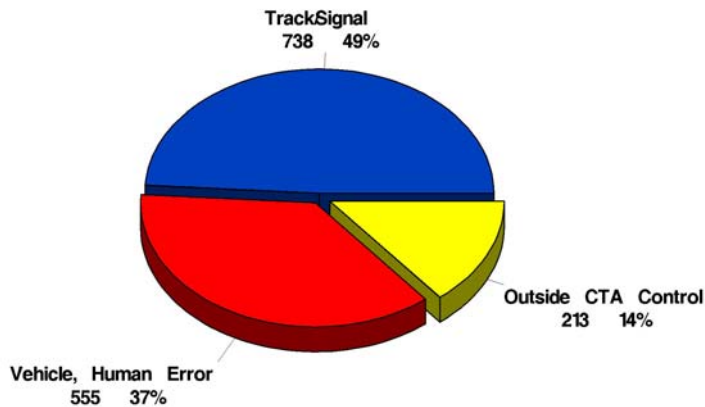
**Annual mean distance was 4,440 miles in 2004  
and 3,995 miles in 2005**



# Challenges to Service Reliability - Rail

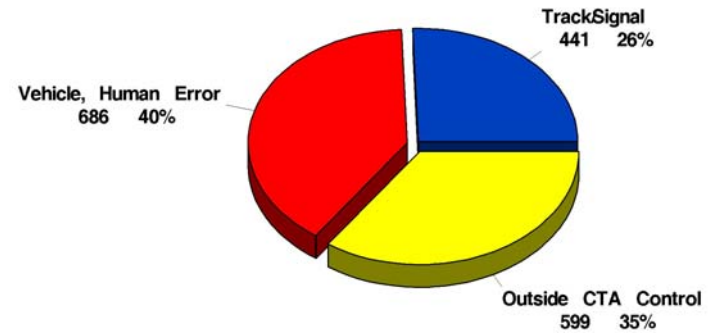
## Major Rail Delays

2004 DELAYS > 10 MINS BY CATEGORY



**14% outside of CTA control  
86% within CTA control**

2005 DELAYS > 10 MINS BY CATEGORY



**35% outside of CTA control  
65% within CTA control**

**Major delays *within* CTA control were reduced from 86% to 65% between 2004 and 2005**



# Headway Consistency - Rail

Improve real-time service management as automated data collection is phased in with line reconstruction and signal improvement projects







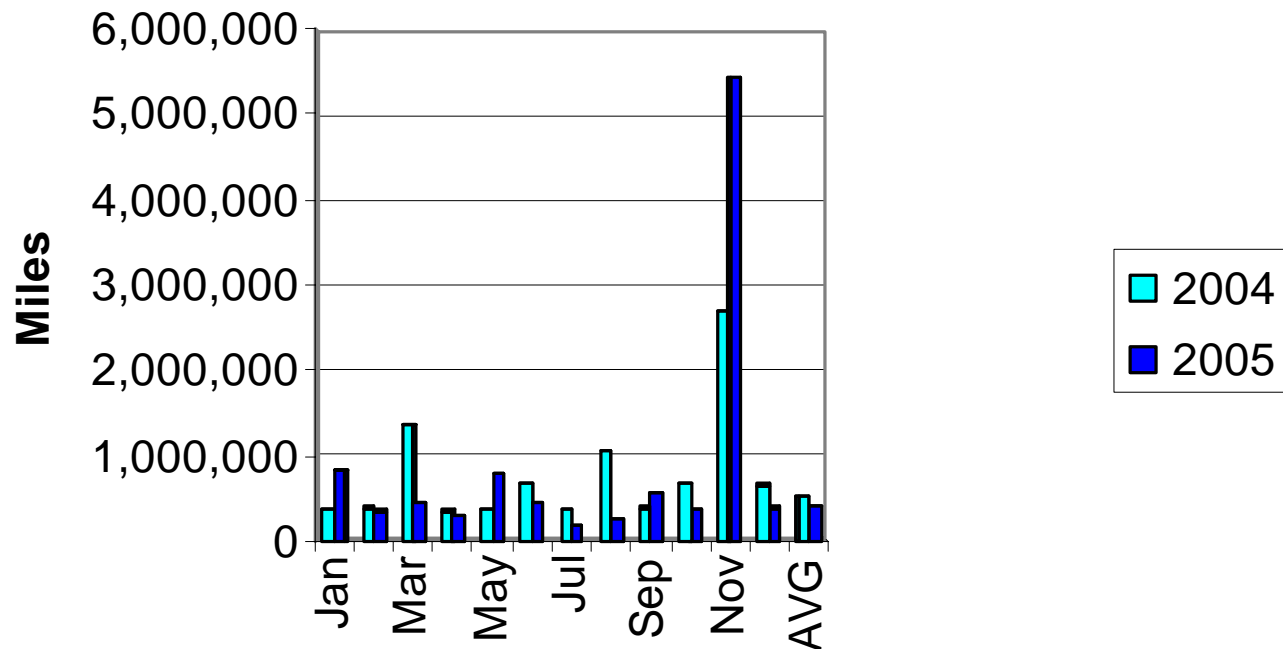
## Service Reliability Initiatives - Rail

- Review scheduled running times to improve service reliability
- Continue pursuing system “state of good repair” for infrastructure and fleet
  - Continue ongoing signal improvement projects
  - Increase Brown Line capacity and accessibility
  - Upgrade Red Line power and communications
  - New cars and overhauls
- Launch system-monitoring technologies to improve service planning, customer communications, and ops management



# Vehicle Reliability - Rail

## Mean Distance between Trains Removed from Service

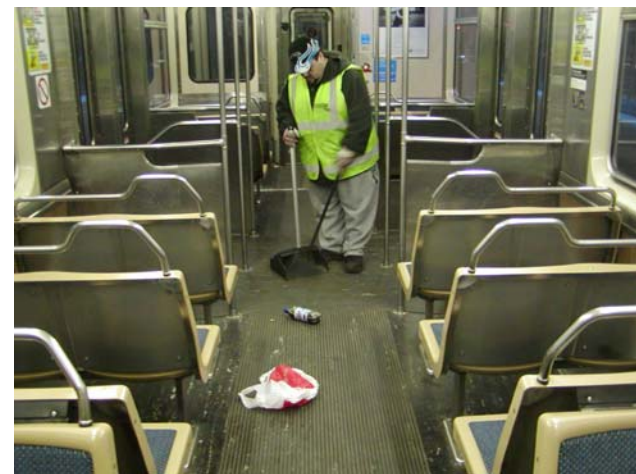


**Annual mean distance was 534,451 miles in 2004  
and 410,911 miles in 2005**



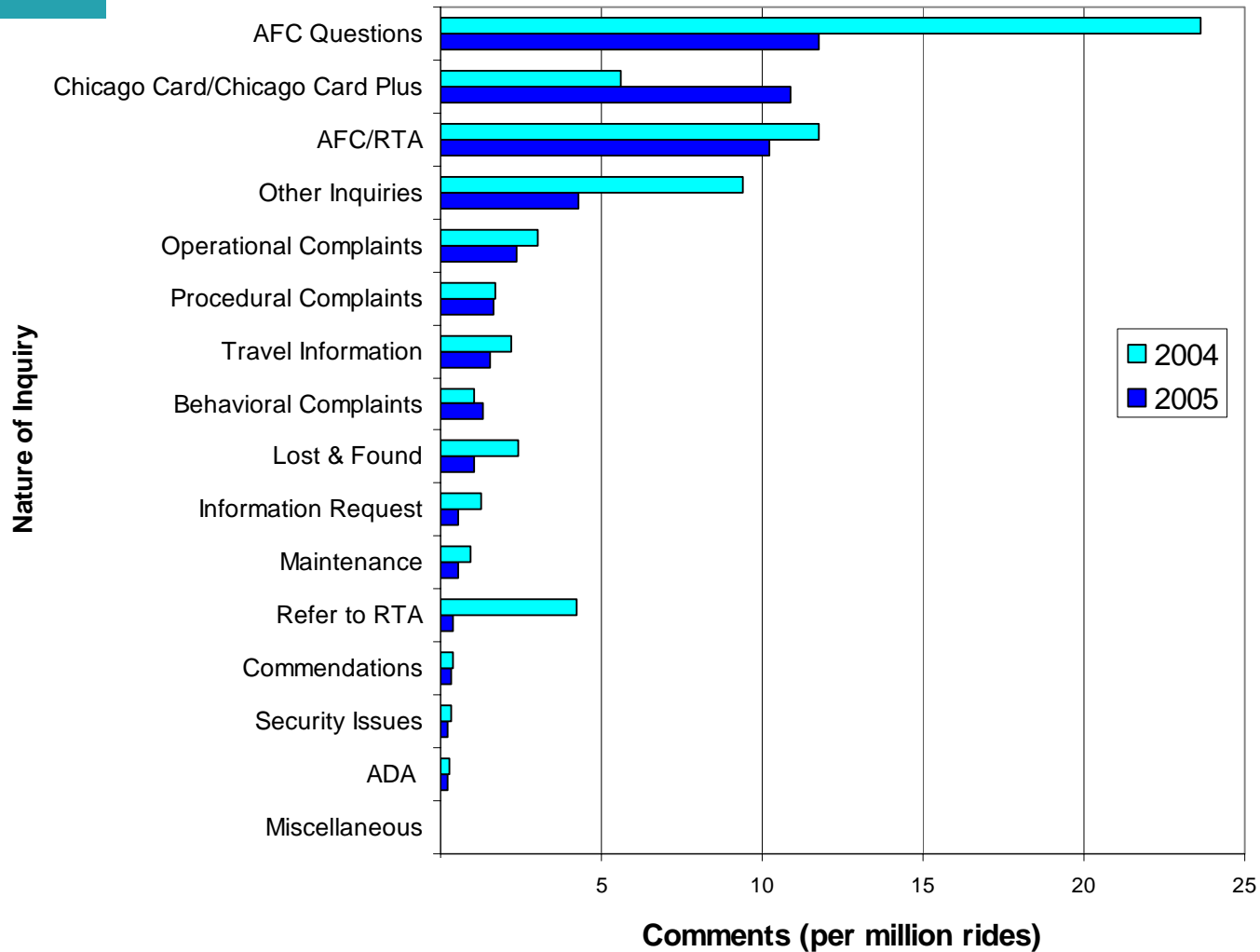
## Other Measures of Service Quality

- Customer Comments
- Cleanliness
- Safety





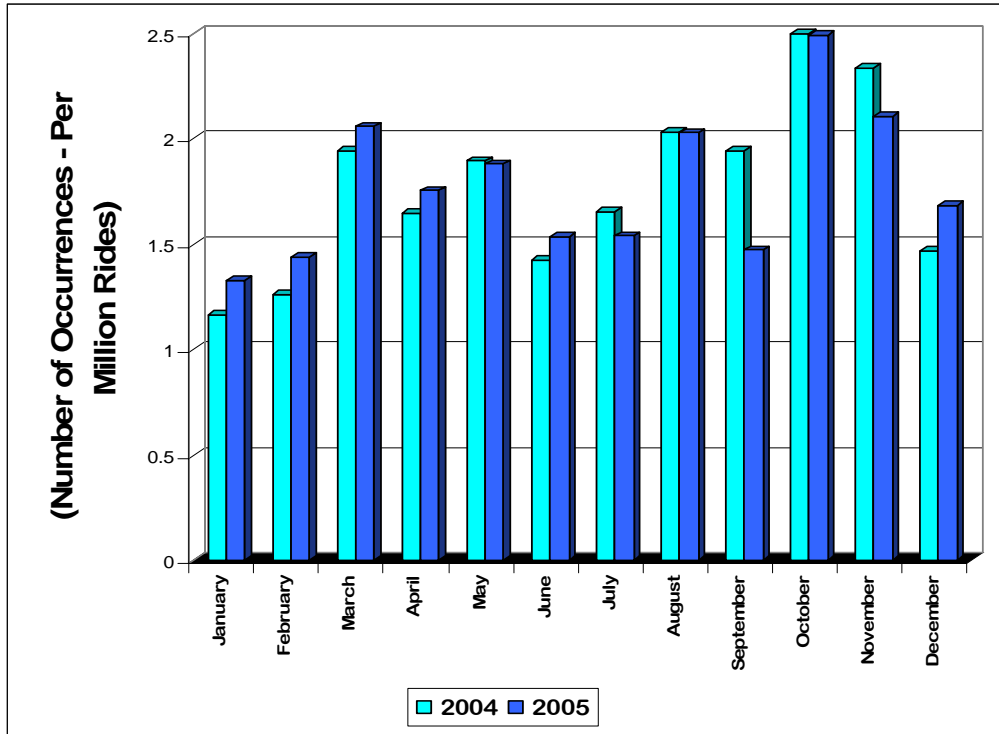
# Customer Comments



**2005 customer complaints are down 8%.**



# Vandalism



**Vandalism costs are recovered by CTA's Law Dept whenever possible**

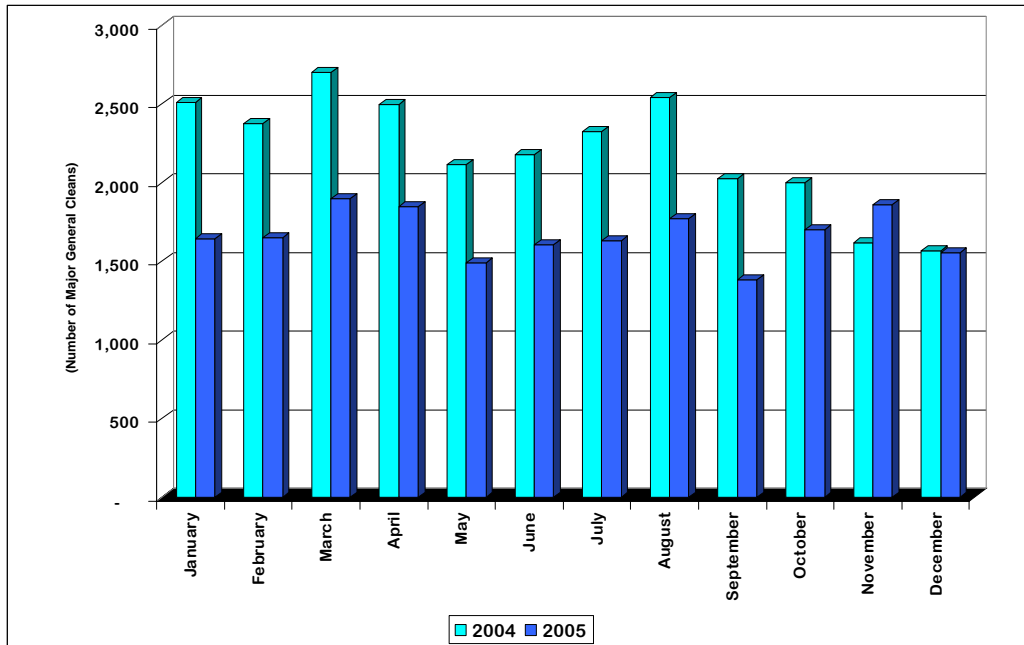
**December 2004: 1.5 Occurrences (Per Million Rides)**

**December 2005: 1.7 Occurrences (Per Million Rides)**

**Vandalism – Destruction and defacement of CTA buses, rail cars and property (as reported to the Control Center).**



# Major Cleans – Bus

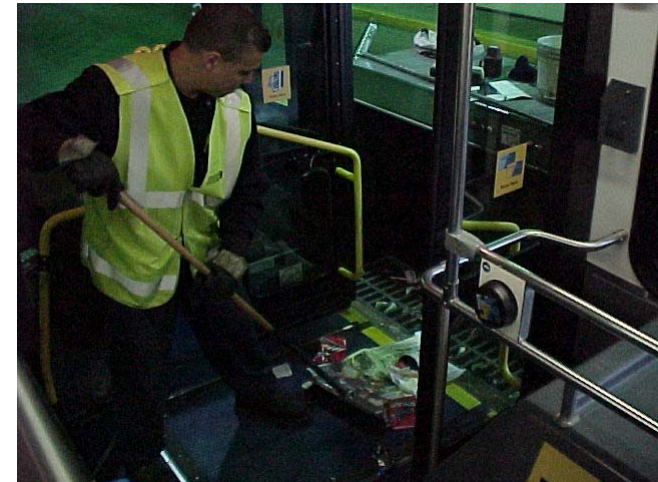


**December 2004: 1,564 Major Cleans**

**December 2005: 1,553 Major Cleans**

**Major Cleans, Bus – Number of major cleans per month. This cleaning is done every 2,000 miles and includes detailed cleaning of the bus interior (ceiling, walls, seats, floors) and exterior (body, wheel wells).**

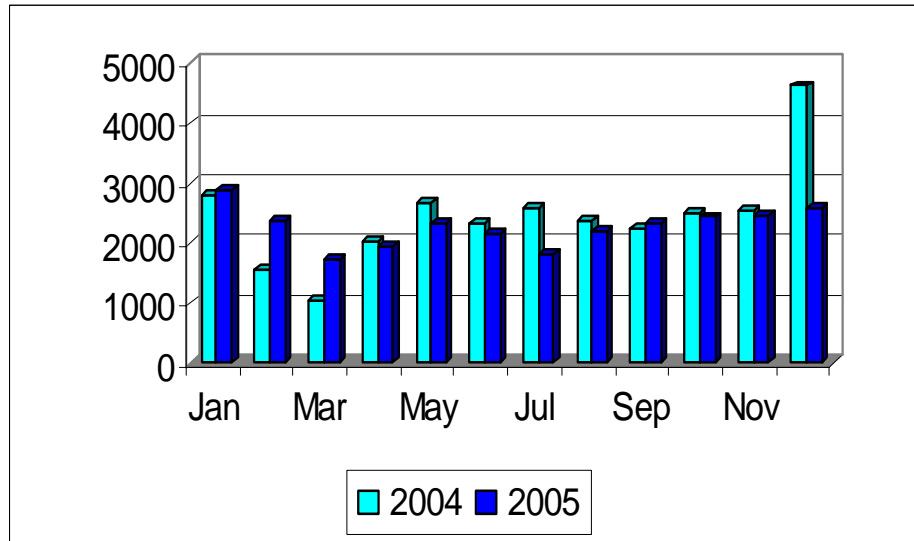
**Buses are swept and receive exterior washes daily**





# Cleanliness – Rail Cars (Interior)

## Miles between Interior Washes



**Rail car interiors are swept and spot-cleaned daily**

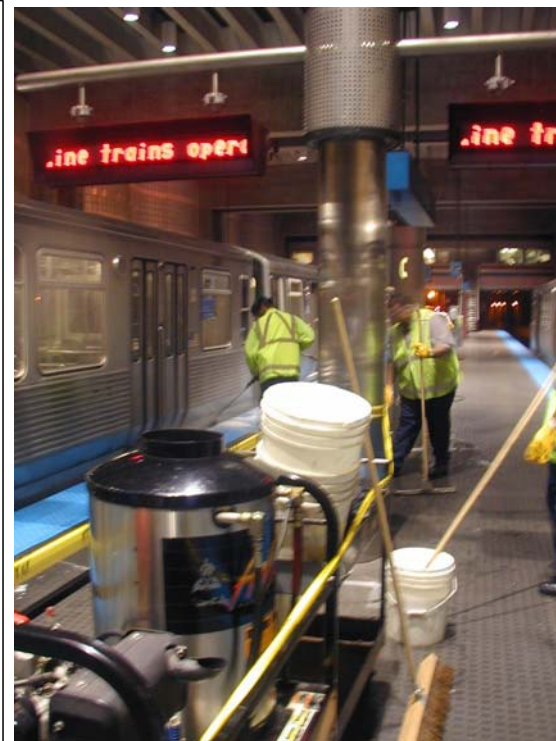
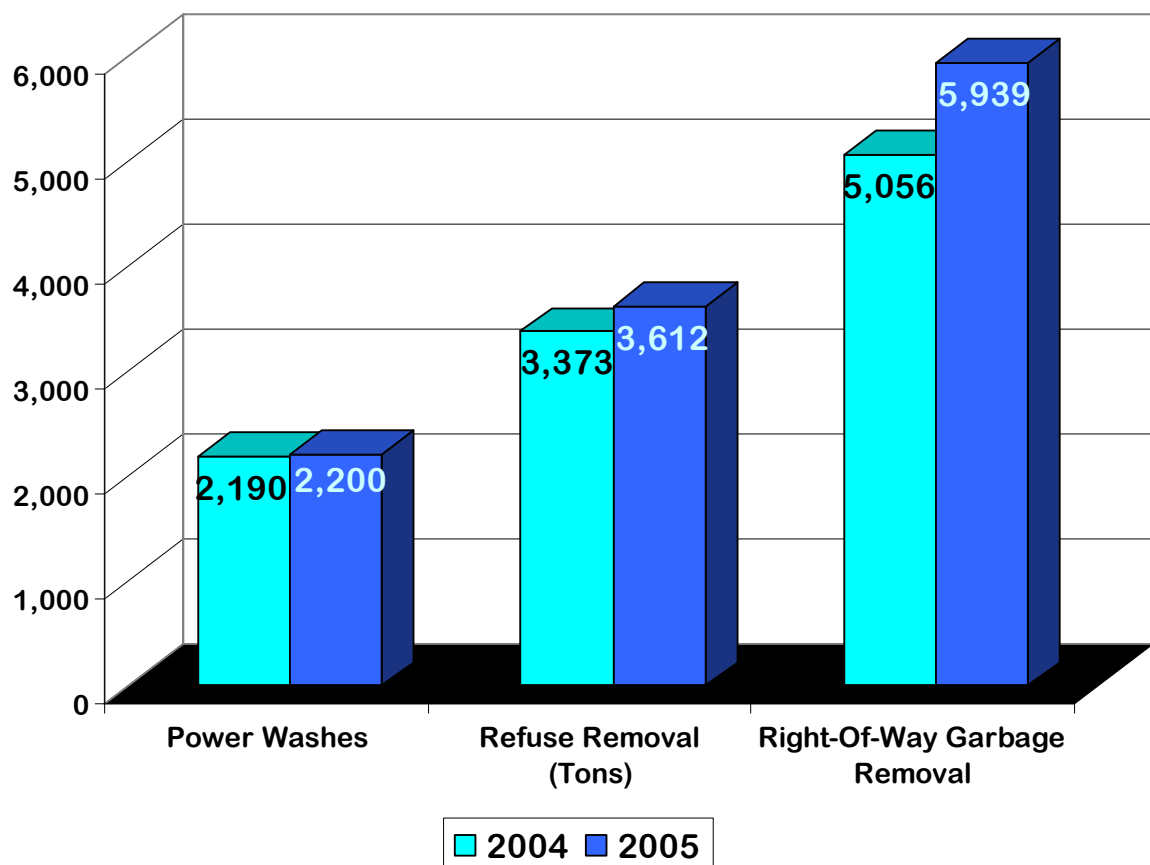


**Average mileage between interior washes was 2,305 in 2004 and 2,315 in 2005**

**Cleanliness - Rail Cars (Interior) – The number of interior cleans that are done per month. This includes washing floors, seats and windows.**



# Cleanliness – Rail Stations

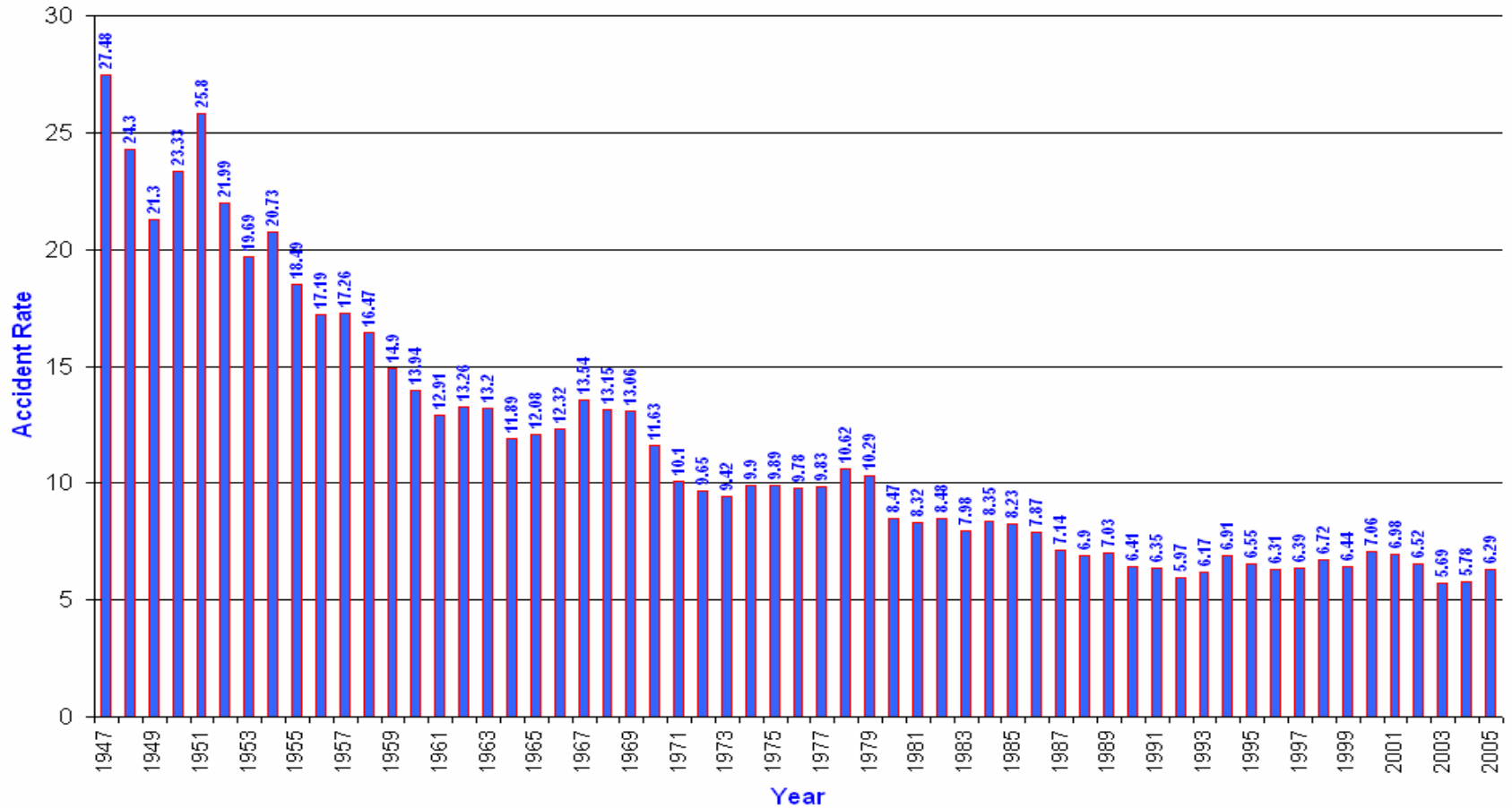


**Rail stations are cleaned throughout the day on rotating schedules**



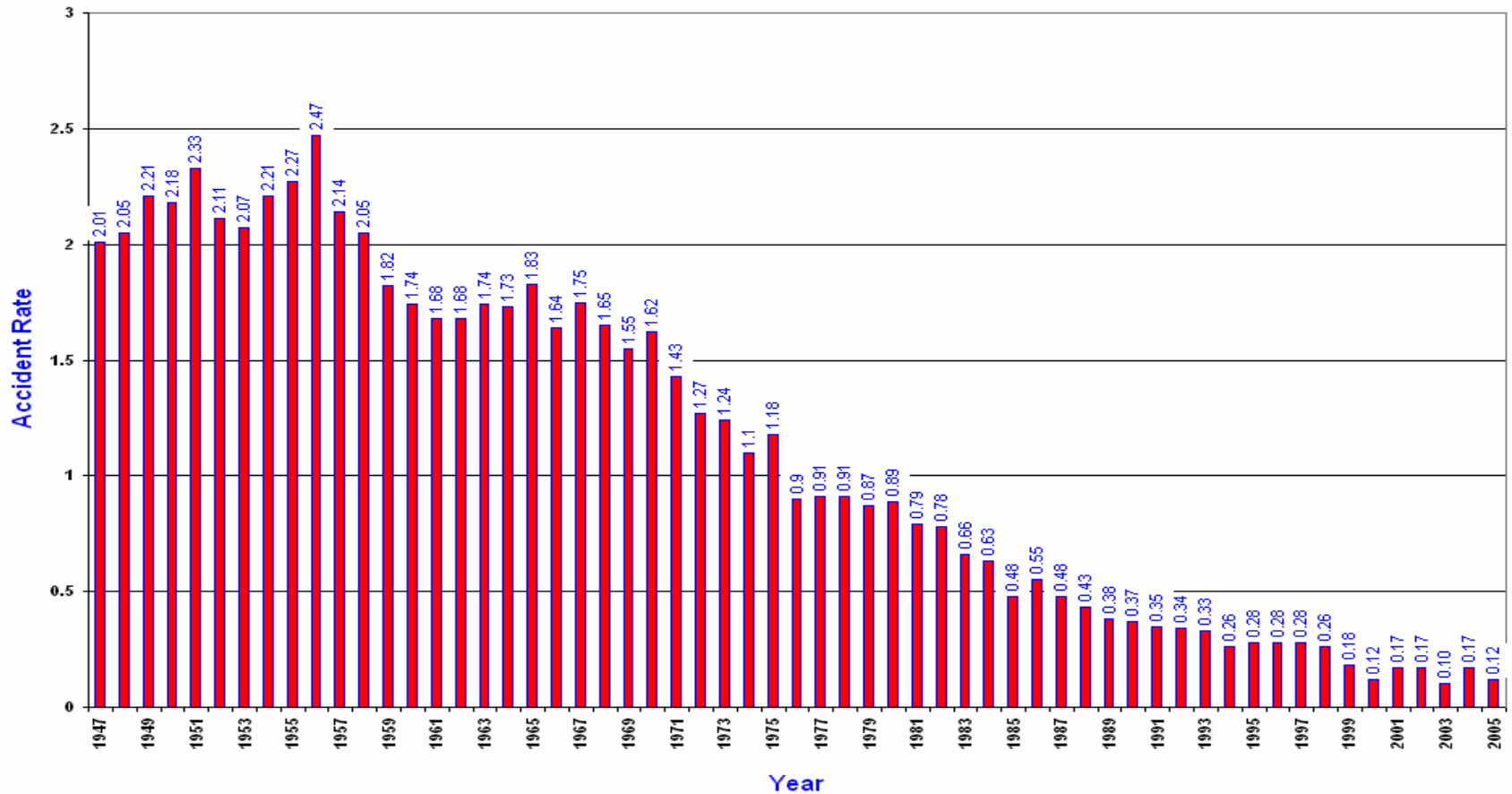


# Bus Accidents Per 100,000 Miles, 1947-2005





# Rail Accidents Per 100,000 Miles, 1947-2005





**We deliver quality, affordable transit services that link people, jobs and communities.**

