Meter-Related Citations Data Guide

November 22, 2013

CIRCLE LESS, LIVE MORE

SFMTA
Municipal Transportation Agency

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1   Introduction

This document provides an overview of the meter-related citation dataset and guidance on how to use and interpret the data including methodology and business rules. One of the goals of SF*park* is to make it easier to pay for parking and avoid citations. Analyzing citation data is a way to measure to what extent that goal was met.

1.1   Timeline

This dataset encompasses the SF*park* pilot period from April 2011 to June 2013 for the months of April and May for 2011, 2012, and 2013.

1.2   Availability of Data

Both meter-related and other and non-meter related citation information is available upon request. For all data requests and related inquiries, please contact info@sfpark.org and put "SF*park* evaluation data request" in the subject line.

The metered citation data file name, format and size are as follows:

- ○ File name: SFpark_CitationData_20112013.csv
- ○ File format: 2010 MS Office Excel Comma Separated Values File
- ○ File size: 38.1 MB

For non-metered citation data, please contact info@sfpark.org.

2   Overview

2.1   Summary of Contents

The dataset in this file: SFpark_CitationData_2011213.csv contains 100,867 records of parking meter citations by date and meter post ID. Fields in the data set include:

- • Area Type (Control or Pilot)
- • Parking Management District
- • Street and Block
- • Block ID
- • PCO Beat
- • Calendar Month (yy-mmm)
- • Date (m/dd/yyyy)
- • Day Of Week Name
- • Violation Code
- • Post ID
- • Citations

For a detailed definition of field types see the data dictionary in section 2.2.

For each citation in the dataset, the name of the pilot or control area is identified in the "Parking Management District" field, and "Area Type" specifies whether it is a pilot or control area. Pilot and control areas consist of:

- Pilot Areas
  - Civic Center
  - Downtown
  - Fillmore
  - Marina
  - Mission
  - South Embarcadero
- Control Areas
  - Richmond
  - Union

Summary

A summary table showing total citations by parking management district (PMD) and year is shown below. The West Portal PMD is expanded to show total number of citations by Block ID for April/May of each year.

Count of Citations	Column Labels				
Row Labels	2011	2012	2013	(blank)	Grand Total
⊞ Civic Center	1788	2197	2319		6304
⊞ Downtown	10480	10492	10320		31292
⊞ Fillmore	1770	1743	1533		5046
⊞ Fisherman's Wharf	2466	2659	1457		6582
⊞ Inner Richmond	1871	2055	2770		6696
⊞ Marina	2833	2015	2503		7351
⊞ Mission	3798	3678	4318		11794
⊞ South Embarcadero	4033	5097	6758		15888
⊞ Union	2268	2104	2052		6424
⊟ West Portal	1209	1099	1182		3490
922	42	31	35		108
923	48	72	36		156
11427	12	10	17		39
11428	25	21	16		62
11528	7	2	5		14
54801	15	9	20		44
69008	37	26	24		87
70300	11	35	32		78
70301	28	23	28		79
72500	268	270	267		805
72501	253	210	259		722
72502	201	192	222		615
72503	262	198	221		681
⊞ (blank)					
Grand Total	**32516**	**33139**	**35212**		**100867**

2.2 Data Dictionary

Field Name	Definition	Example
Area Type	If the area the violation occurred in is a pilot or control area	Control
Parking Management District	The name of the parking management district or neighborhood the violation occurred in	Inner Richmond
Street and Block	The address or location of the block the violation occurred at	02ND AVE 200
Block ID	Each block is assigned a unique Block ID, this makes it easy to spatially join in GIS and analyze	10202
PCO Beat	The Parking Control Officer (PCO)'s beat identification number	605
Month	The month the violation occurred	May
Year	The year the violation occurred	2011
Date	The exact date of the violation	5/30/2011
Day Of Week Name	The day of the week the violation occurred	Monday
Violation Code	The code for the violation that was cited*	T202
Post ID	The parking meter post's unique identification number	102-02990
Citations	The number of violations cited at that meter on that day	1
* There is a detailed violation type code dictionary below		

2.3 Violation Code Dictionary

Violation Code	Violation	Description
T202	PRK METER	If a vehicle is parked at an expired meter, overtime at a meter, or stayed longer than 2 hours at a broken meter.
T202.1	PRK METER DOWNTOWN	Like above, but downtown.
T219	PARKING METER M/C	Vehicle parked at Motorcycle metered space
T27	MC PARKING ZONE	Vehicle parked at striped motorcycle only space
T32.10	OFF STREET PARKNG	Non-payment at off-street meter. Will include non-payment at publicly owned paid lot starting July 2013.
T32.12	OFF ST OVTME	Overtime at an off-street meter.
T33.3	TRUCK LOADING ZONE	Vehicle parked in a truck loading zone only
T38B	YELLOW ZONE DNTN	Vehicle parked in a yellow zone (commercial loading only) in downtown
T38B.1	YEL ZN OUT/DNTN	Vehicle parked in a yellow zone (commercial loading only) outside of the downtown area

2.4 Business Rules

Changes in Parking Control Officer (PCO) Deployment

Deployment of parking control officers may impact the number and types of citations issued. A decrease in citations issued does not necessarily equate to a decrease in citation opportunities, or vice versa. Data users are advised to take this into consideration when analyzing meter-related citation data. See further details in the section below.

3   Methodology

3.1   Parking Control Officer (PCO) Deployment Method

There are approximately 270 Parking Control Officers (PCOs). The number of PCOs changes from year to year based on budget needs and constraints.

The PCOs are deployed 24 hours a day, seven days a week. New beats are assigned to PCOs every six weeks. Shifts also change seasonally; after early October, the 6am general meter shift is eliminated and then is added again in the spring.

General meter enforcement shifts are Monday-Saturday from 6am to 8:30pm and Sundays from 11am to 6:30pm. General meter shifts begin at 6am, 9am, and 11am. PCOs travel their beats by driving, carts, bicycling, and walking.

PCOs are assigned to specific details or types of enforcement:

- General Meter Enforcement
- Residential Permit Parking
- Street cleaning
- Driveways
- Unpaid Citations or Boot
- Disabled placard
- Abandoned autos, etc.
- Fixed posts (eg, direct traffic for special events)

3.2   Data Collection and Management

When a citation opportunity arises, PCOs are expected to issue parking citations by using handheld devices. After citation details are entered into the handheld and a valid citation is generated, a paper ticket is printed and left on the vehicle. As of December 2011, meter post IDs are pre-loaded onto the enforcement handheld devices to ensure valid post IDs are entered for meter-related citations.

All issued citation records are stored in the handheld during the shift and uploaded into citation processing vendor database (Xerox) after the handheld is docked in the networked cradle at the end of each shift.

The resulting database includes both meter related and non-metered related violations such as blocked driveway or fire hydrant, disabled placard misuse, etc. The data are combined and maintained by Xerox. A subset of this data is delivered weekly to the SFMTA via FTP transfer of CSV file. This dataset is then pushed to San Francisco Parking Meter Management System (SFPMMS) database and subsequently uploaded to SF*park*'s data warehouse.

Citation issued in handheld device	Xerox	SFPMMS	SF*park* Data Warehouse	Data Exports/Reports

4 Known Issues

4.1 5% Missing Records

Preliminary analysis suggests that approximately 5% of all citation data does not get transferred from Xerox to SFMTA. Further analysis is required to better understand the full extent of the issue, the cause of the omission, and options for reconciliation between databases.

4.2 PCO Deployment changes

The numbers of officers deployed, total hours of deployment, changes in beat and citation type assignments, special events and fixed post assignments affect the citation data. As such, definitive conclusions regarding trends in citations issued may be difficult to obtain.

4.3 Incorrect meter post IDs

Prior to December of 2011, the meter post IDs, a required field in all citations issued, were inputted by PCOs via "free-form" entry with no validation. This means that citations could be attributed to erroneous or incomplete post IDs. To remedy this data entry issue, after December 2011, valid post IDs were pre-loaded onto the enforcement handheld devices so that citations could only be written for valid post IDs. Since the system no longer allows the "free-entry" form and only valid post ID can be chosen from the list.

Corrections were not made to citation records prior to December 2011, and the extent to which free-form entry errors impacted available data has not been assessed.

5 Frequently Asked Questions

How many years of data are available?

2005 through June 30, 2013.

Is the data available by certain geographic areas?

Yes. Metered citation data has the following geographic identifiers:

- Parking Management District
- Address of block e.g. EDDY ST 500
- Block ID

- Meter post ID
- PCO Beat

What do the violation codes mean?

See appendix A for a full violation code dictionary.

What are the fine amounts?

Citation amounts change from year to year. Overtime parking meter fines as of September 2013 are $72.

Is the data available by time of day?

Yes, the data is time stamped.

Is there a quota or minimum number of citations to be issued per officer?

No, there is not.

What are the hours of meter enforcement?

General meter enforcement shifts are Monday-Saturday from 6am to 8:30pm and Sundays from 11am to 6:30pm.General meter shifts begin at 6am, 9am and 11am.

Appendix A: Violation Code Dictionary

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