



MUSEUMS IN DC

BEHIND THE SCENES OF SMITHSONIAN INSTITUTION

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OCTOBER 2017



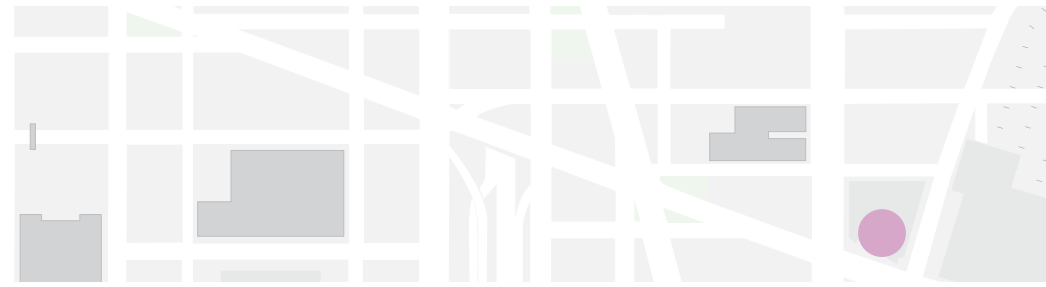
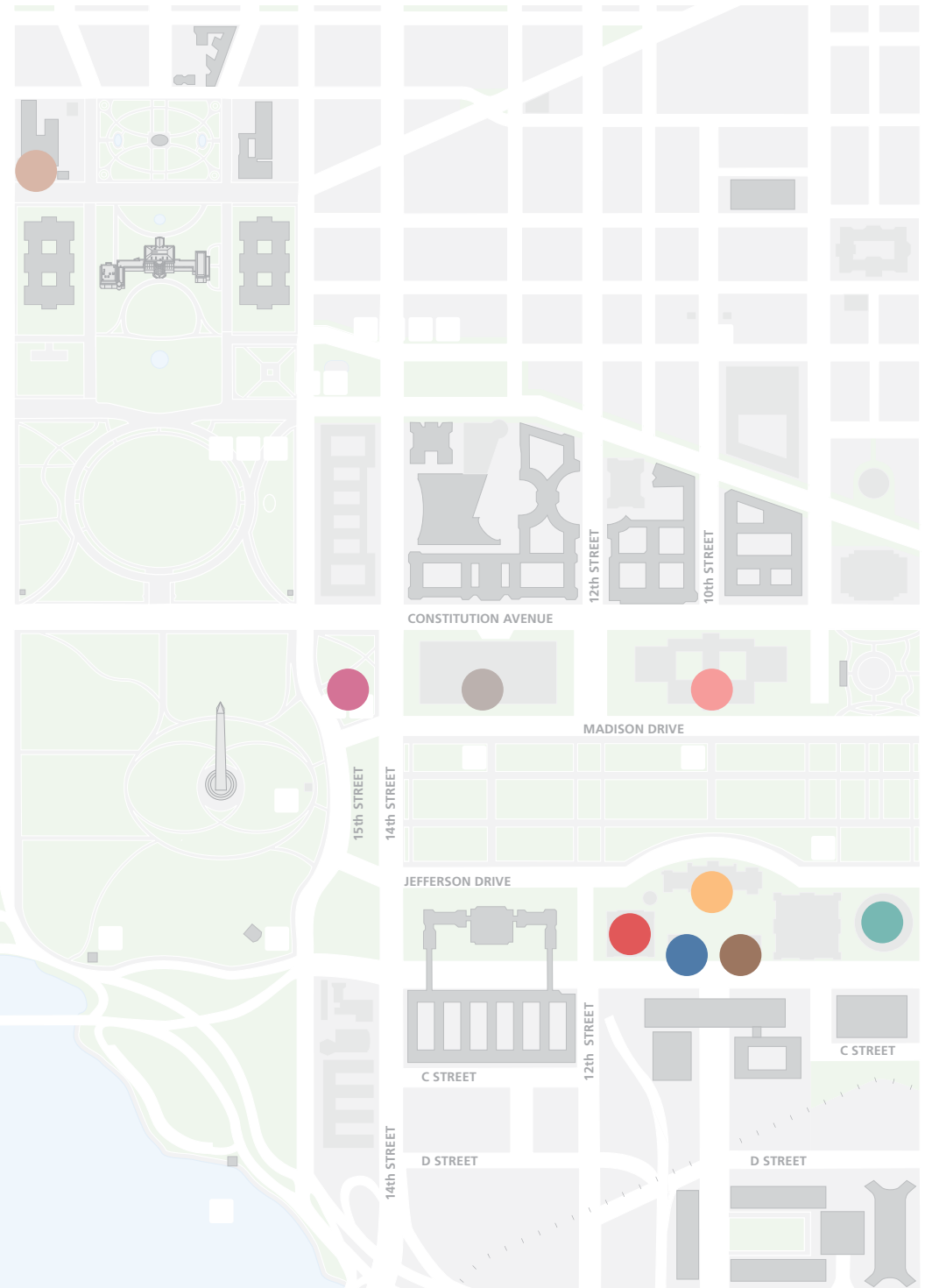
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BACKGROUND

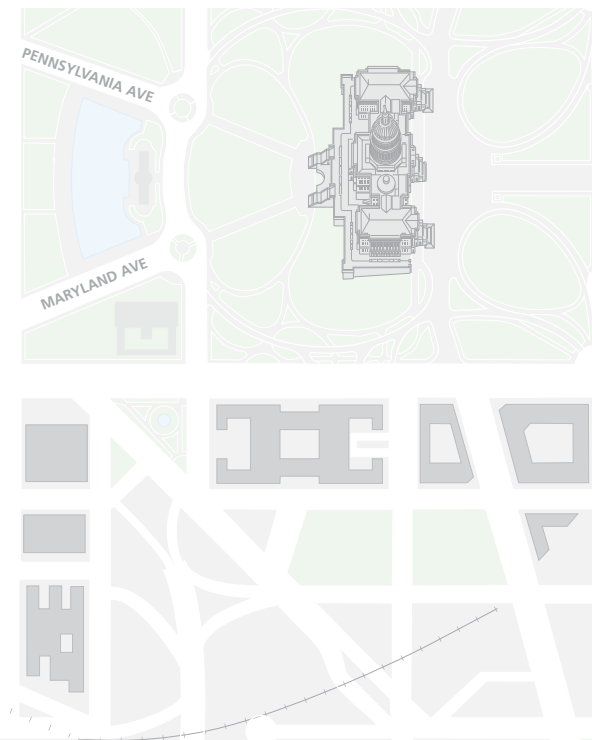
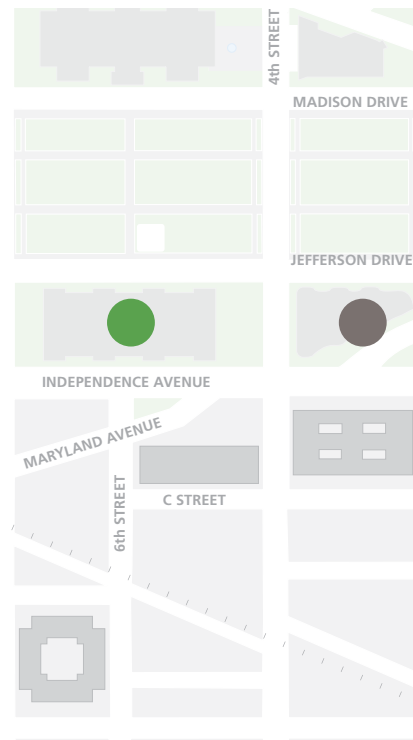


Photo: siarchives.si.edu/history/smithsonian-institution-building-castle



Why this Data?

This is an opportunity to dig deep and see what can be learned about the museums where I live (in the DC metro area).



	A	B	C	D	E	F	G	H	I	J	K	L
1	X	Y	OBJECTID	NAME	AL	Overview	Data	API Explorer				
2	-77.0559	38.91086	1	DUMBARTON								
3	-77.0526	38.94364	2	HILLWOOL HI								
4	-77.0397	38.89585	3	CORCORA CC								
5	-77.0464	38.8988	4	THE TEXTILE I								
6	-77.0517	38.95992	5	ROCK CREEK								
7	-77.0292	38.90006	6	NATIONAL M								
8	-77.0446	38.90803	7	HEURICH F TH								
9	-77.0382	38.90598	8	CHARLES SUN								
10	-77.0273	38.88828	9	FREER GALLE								
11	-77.0421	38.91282	10	NATIONAL M								
12	-77.023	38.89819	11	DONALD V NA								
13	-77.0469	38.91151	12	THE PHILLIPS								
14	-77.0437	38.9146	13	L. RON HUL I								
15	-77.023	38.89819	14	DONALD V SM								
16	-77.0254	38.91644	15	AFRICAN AM								
17	-77.0229	38.90263	16	HISTORICAL S								
18	-77.0415	38.8928	17	ART MUSEUM								
19	-77.026	38.88882	18	SMITHSONI								
20	-77.0233	38.89699	19	INTERNAT SP								
21	-77.0464	38.89982	20	LUTHER WGE								
22	-77.0414	38.89635	21	OCTAGON OC								

Museums in DC

8/9/2017 Spatial Dataset 81 Rows

The [Chief Technology Office \(OCTO\)](#) has captured locations for many of the District of Columbia's museums. This includes museums operated by government and private organizations. DC's museums and cultural centers are many and therefore this dataset should not be considered a complete list.

Attributes

Chart Map Visualization

ALT_NAME Text	LABEL Text	MAR_ID Number	MAR_LATITUDE Number	MAR_LONGITUDE Number	MAR_MATCHADDRESS Text	MAR_XCOORD Number
MAR_YCOORD Number	NAME Text	SHOW MORE 2 Attributes				

The Data

The locations of many **museums** (both government and privately operated) in the District of Columbia were captured in a **spatial dataset** by the Chief Technology Office (OCTO).

- 80 museums (rows)
- 10 location data (columns)
- CSV or Shapefile (map) download

Source: [\[opendata.dc.gov\]](https://opendata.dc.gov)

	C	D	E	F	G	J	K	M	N	O	P	Q	R	S	T
1	OBJECTID	NAME	ALT_NAME	LABEL	MAR_MATCHADDRESS	MAR_LONGITUD	MAR_LATITUD	Date Open	Objects	Annual Budget	Employees	Sq Ft	2016 Vists	2015 Visits	2014 Visits
2	7	ANACOSTIA COMMUNITY MUSEUM		Anacostia Community Museum	1901 FORT PLACE SE	-76.9767824	38.85657522	1967					28,000	30,000	42,000
3	14	ARTHUR M. SACKLER GALLERY		Arthur M. Sackler Gallery	1050 INDEPENDENCE A	-77.02644398	38.88795359	1987	25,000			40,905	213,000	150,000	182,000
4	8	ARTS AND INDUSTRIES BUILDING		Arts and Industries Building	900 Jefferson Dr SW	-77.024494	38.88815	1881					64,000	0	
5	15	FREER GALLERY OF ART		Freer Gallery of Art		-77.027348	38.888268	1923	5,000	17,500,000	100	15,039	10,000	389,000	371,000
6	9	HIRSHHORN MUSEUM AND SCULPTURE GARDEN		Hirshhorn Museum and Sculpture Garden		-77.022961	38.888407	1974	12,000	10,940,000	44	197,000	659,000	681,000	552,000
7	3	NATIONAL AIR AND SPACE MUS													
8	18	NATIONAL MUSUEM OF AFRICA										85000	733,000	0	
9	2	NATIONAL MUSEUM OF AFRICA									34	22,000	206,000	213,000	203,000
10	5	NATIONAL MUSEUM OF AMERIC									237	300,000	3,800,000	4,100,000	4,000,000
11	10	NATIONAL MUSEUM OF NATUR		Donald W. Reynolds Center for American Art and Portraiture (Smithsonian American Art Museum and The National Portrait Gallery)					880,000		523	325,000	7,100,000	6,900,000	7,300,000
12	6	NATIONAL MUSEUM OF THE AM									248	250,000	1,100,000	1,200,000	1,300,000
13	1	DONALD W. REYNOLDS CENTER									97	152,500	1,200,000	1,300,000	1,100,000
14	16	NATIONAL POSTAL MUSEUM													
15	17	NATIONAL ZOOLOGICAL PARK		National Museum of African American History and Culture					1.7M		32	35,000	398,000	357,000	401,000
16	11	RENWICK GALLERY													00
17	12	S. DILLON RIPLEY CENTER		National Museum of African Art											00
18	13	SMITHSONIAN INSTITUTION -		National Air and Space Museum											00
				National Air and Space Museum's Steven F. Udvar-Hazy											146,000
				National Museum of American History											1,200,000

Creating the Dataset

Searching for more data to add to this led to the Newsroom of the Smithsonian, which has **fact sheets** and **visitor stats** for its museums.

- Annual Budget
- Total Employees
- Exhibit Space (Sq Ft)
- Number of Artifacts

Sources: [newsdesk.si.edu/about/stats]
[www.si.edu/dashboard]

Culled data to focus on **Smithsonian** museums in Washington, DC on or near the National Mall.

Director: Kirk Johnson
Total full-time employees: 523
Annual budget (federal and trust) FY 2016: \$117 million
Approximate number of artifacts/specimens: 145 million
 (includes the arrival in 2016 of new specimens acquired from the U.S. Department of Agriculture's National Parasite Collection)
Total museum size: 1.32 million square feet
Public space size: 325,000 square feet
Visits (2015): 7 million



HISTORY

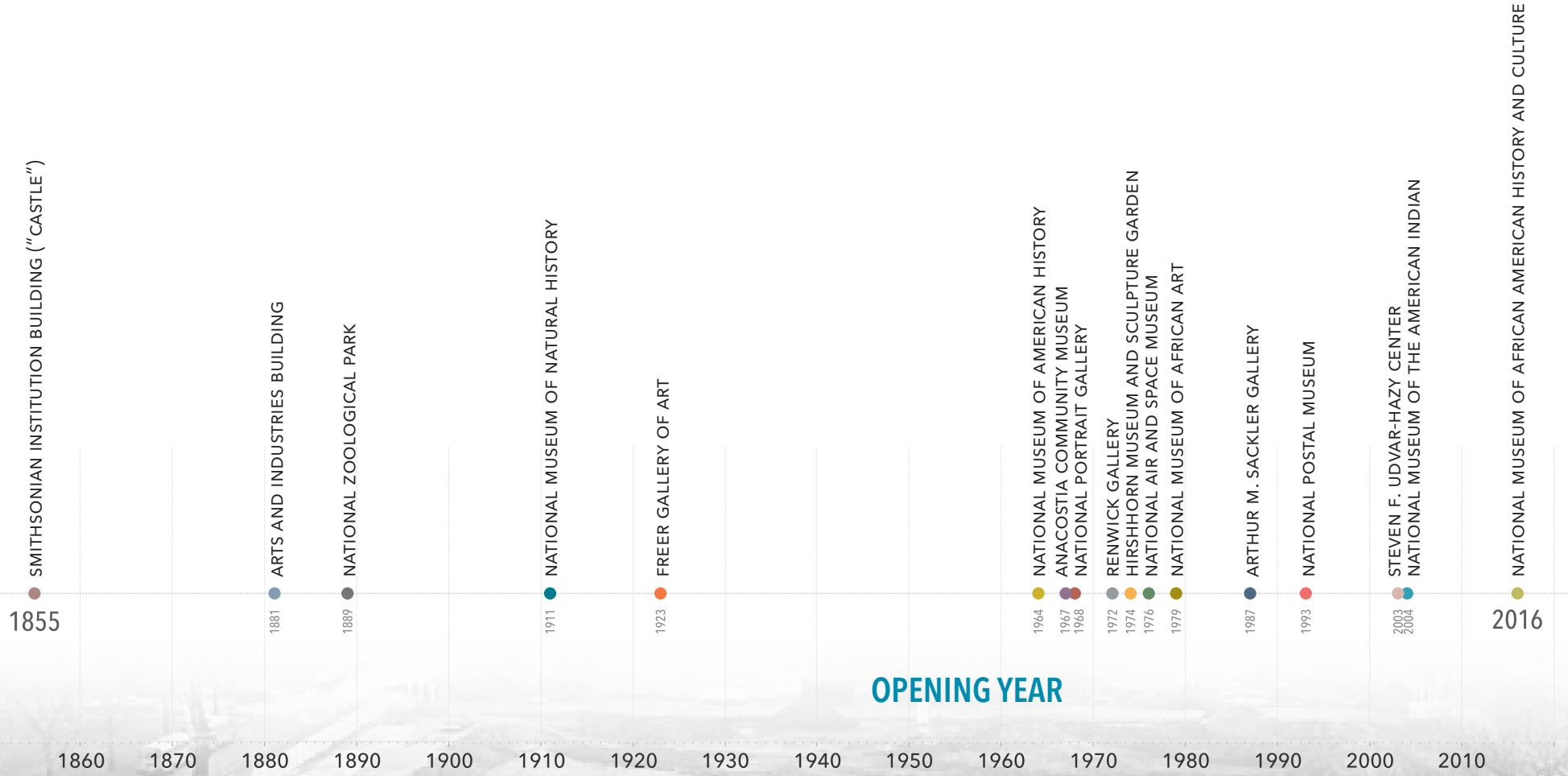
The Smithsonian consists of **nineteen** museums and the National Zoological Park, located in Washington, DC, Maryland, New York City, and Virginia.

The **Smithsonian Institution Building** aka “The Castle” opened in **1855** on the National Mall.

There are **6,500** Smithsonian employees and **6,300** volunteers.

There were **30 million visits** to the Smithsonian in 2016.

The total number of objects, works of art and specimens at the Smithsonian is estimated at nearly **154 million**, of which 145 million are scientific specimens at the **National Museum of Natural History**.



OPENING YEAR

VISITS

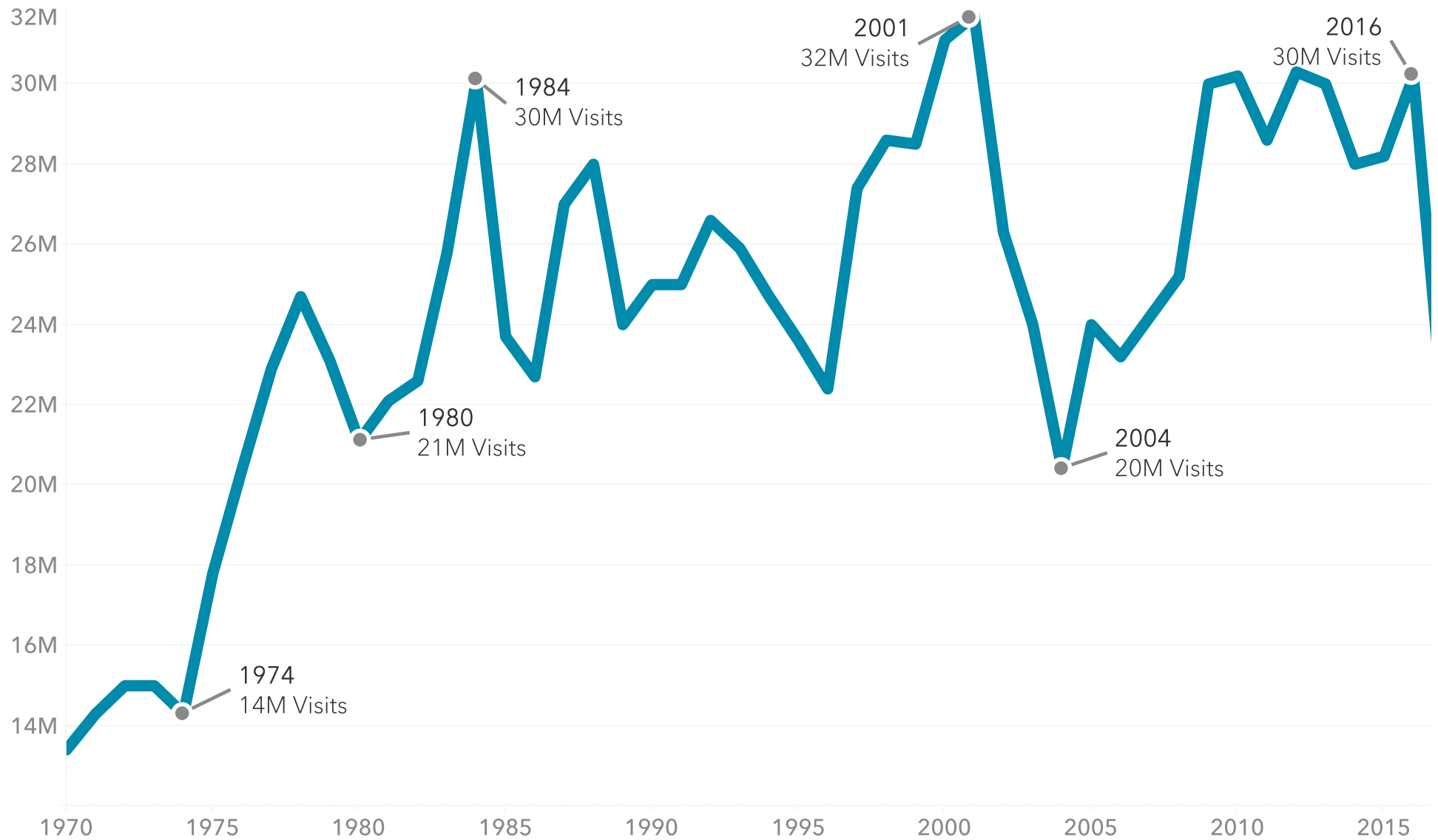
The Smithsonian Newsdesk and Dashboard publish data about the visits to thier museums.



Records for visits date back to 1970.

TOTAL VISITS PER YEAR

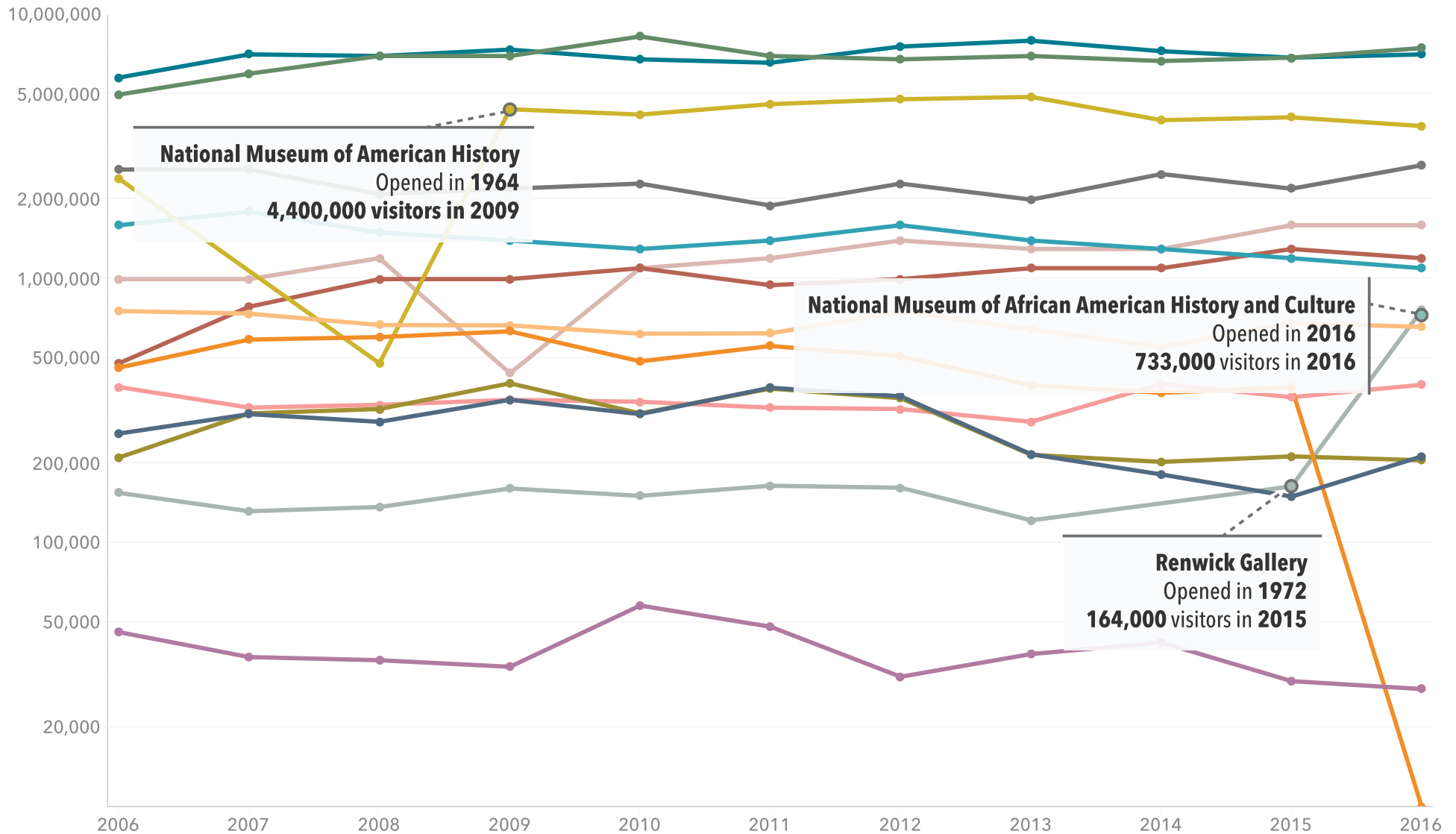
1970 - 2016



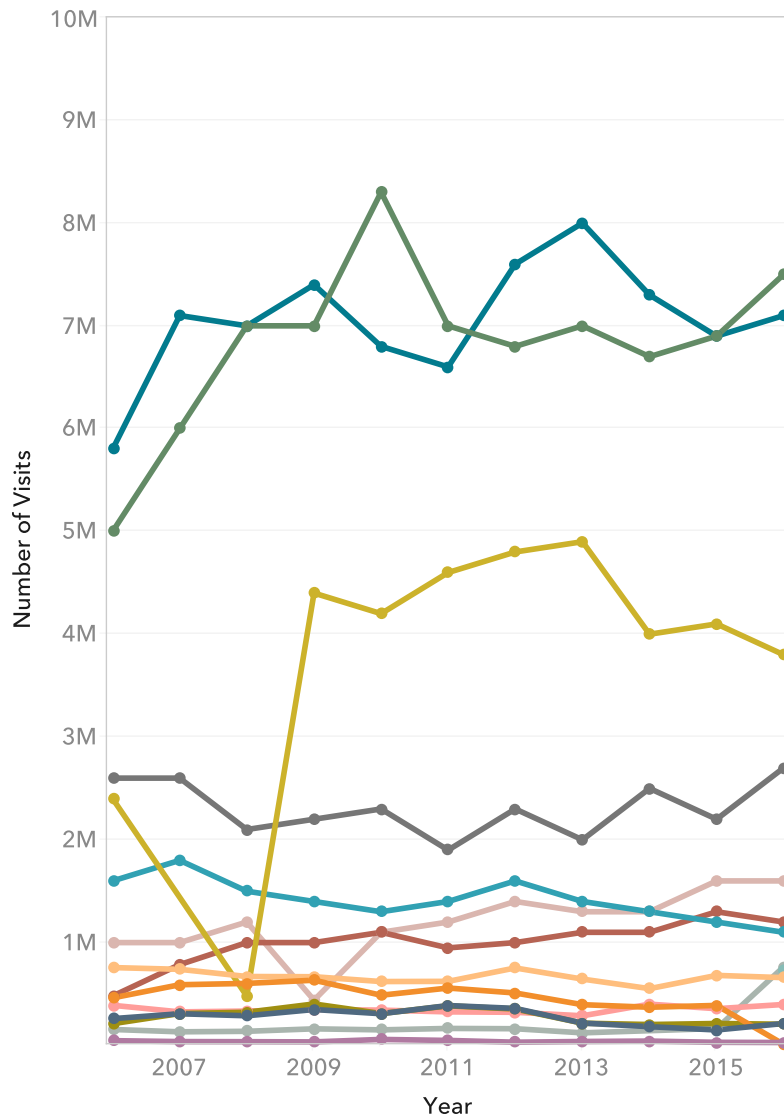
Visitor stats **per museum** go back to 2001. This is a snapshot of the last 10 years.

TOTAL VISITS PER MUSEUM

2006 - 2016



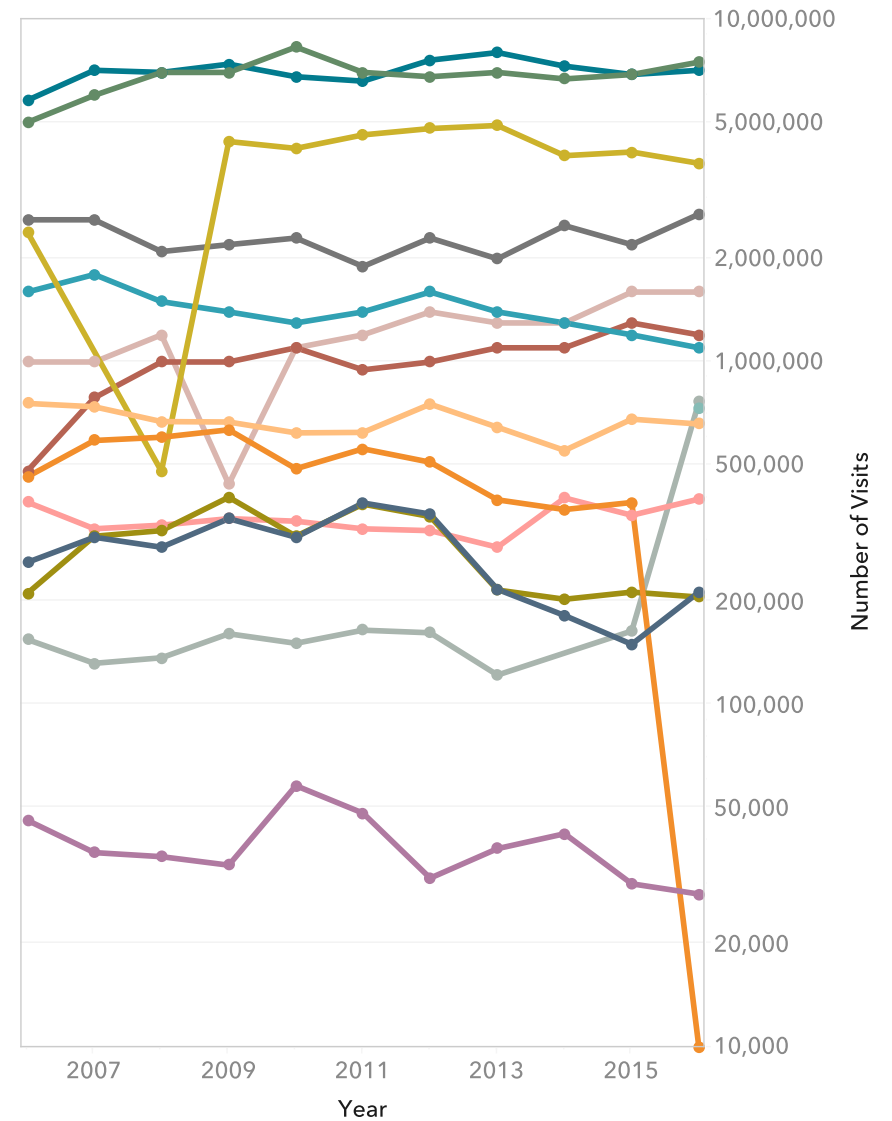
Using a **Logarithmic Scale** on the Y-axis means markers increase by a factor of 10 and gives a **clearer view** of all the data points and lines for all of the museums.



VS.

VISITS PER MUSEUM OVER 10 YEARS

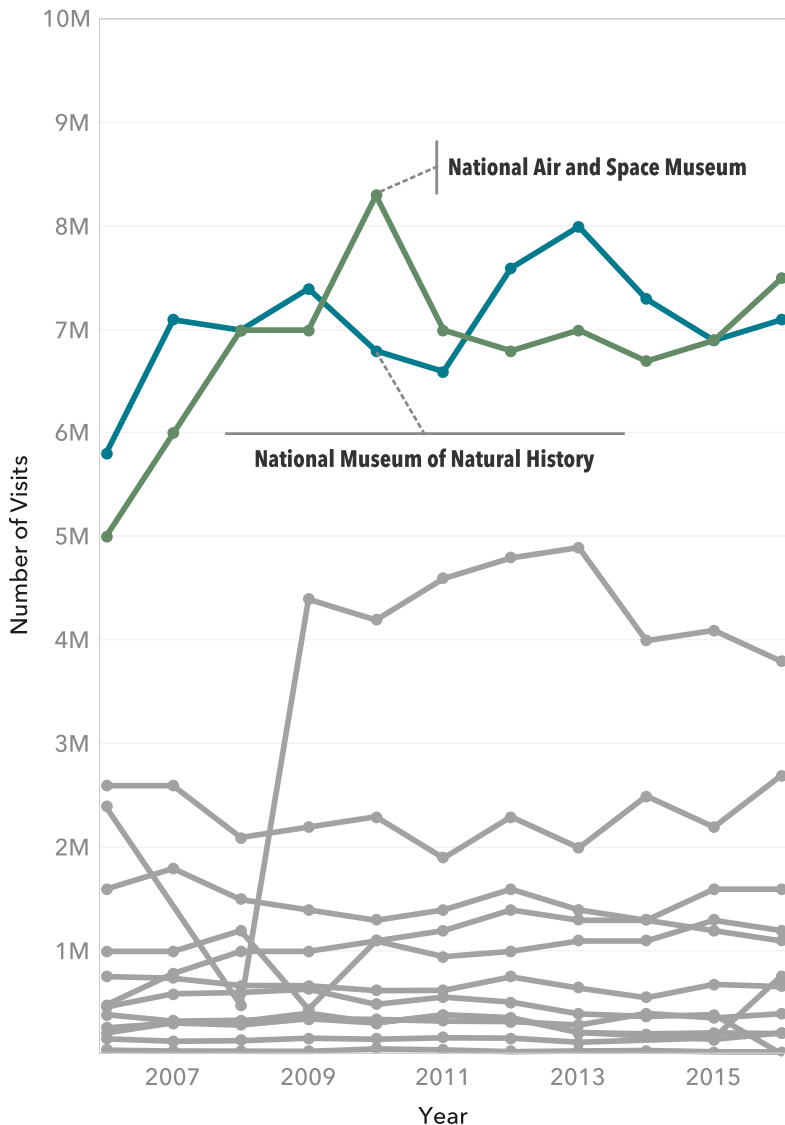
2006 - 2016



The **National Museum of Natural History** and the **National Air and Space Museum** have, by far, the highest number of visits overall. Switching back to a **linear** Y-axis helps highlight these two lines.

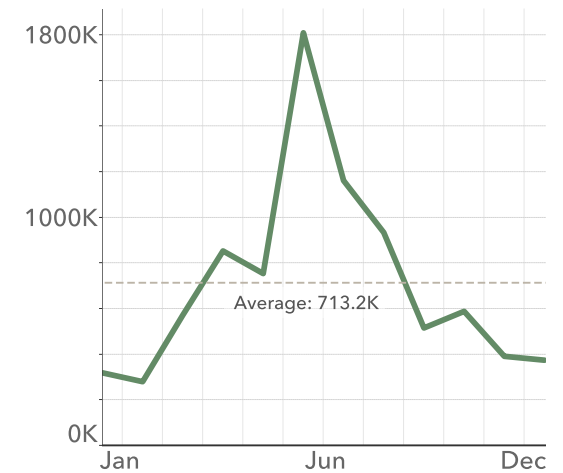
AVERAGE VISITS

Looking at visits for the past 10 years and monthly visits for fiscal year 2016.



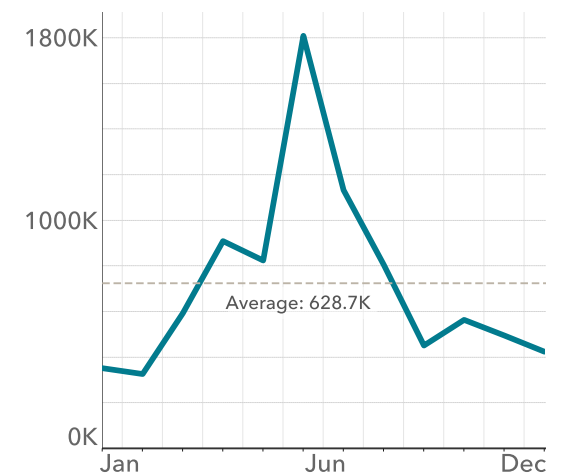
National Air and Space Museum

10 year average:
6.84M per year
569.7K per month
 12 month average:
713.2K per month
 FY2016 total:
8.56M



National Museum of Natural History

10 year average:
7.05M per year
628.7K per month
 12 month average:
628.7K per month
 FY2016 total:
7.54M

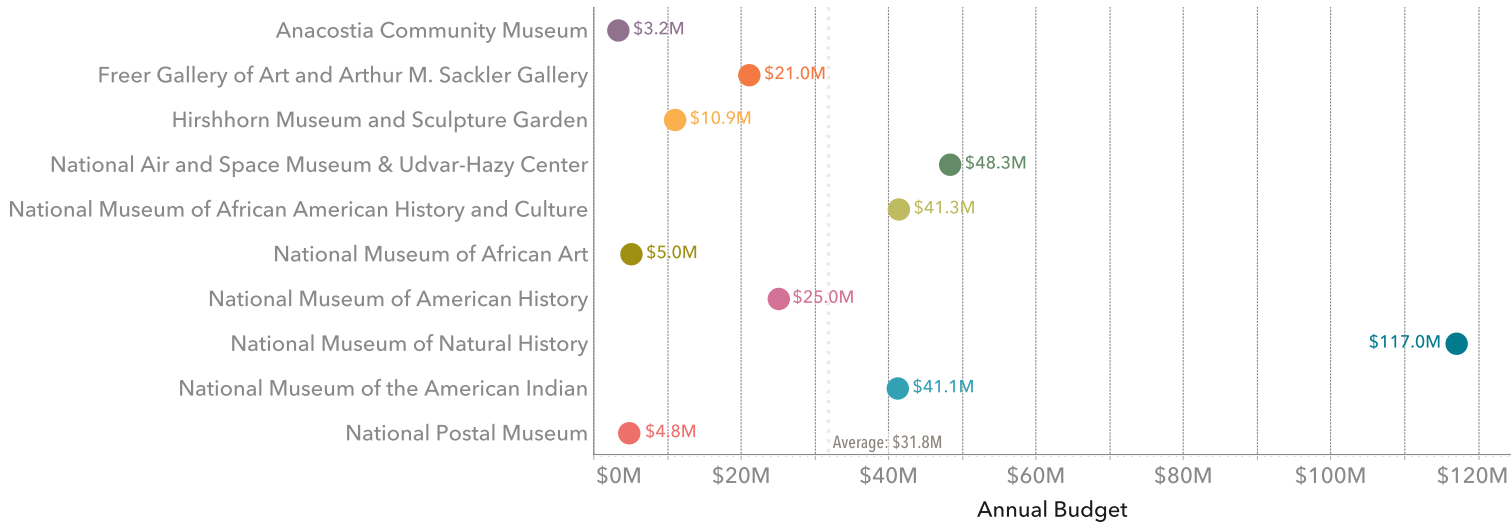


Visits per month - FY2016

Some interesting trends appear when comparing the **annual budget** and **number of visitors** over the past year for some of the Smithsonian museums.

COMPARISONS

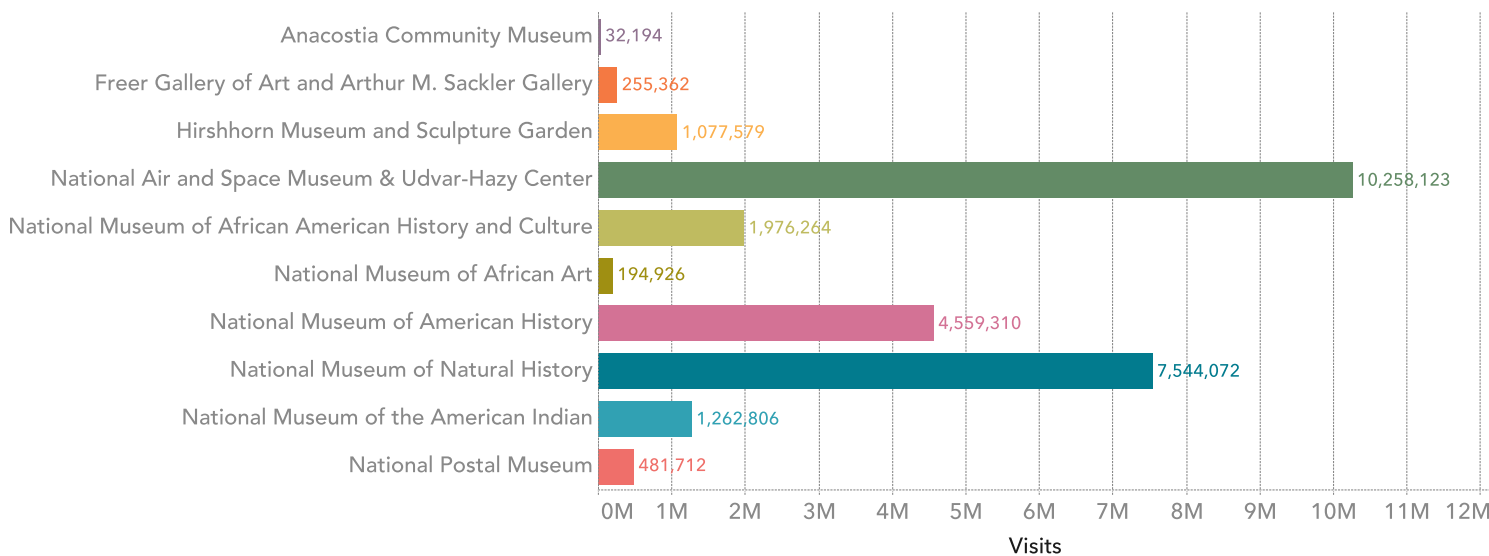
Fiscal Year 2016 (June 2016 - June 2017)



National Museum of Natural History **budget is over 2x** that of the National Air and Space Museum.

National Air and Space Museum has the **highest number of visitors**, but only the second highest budget.

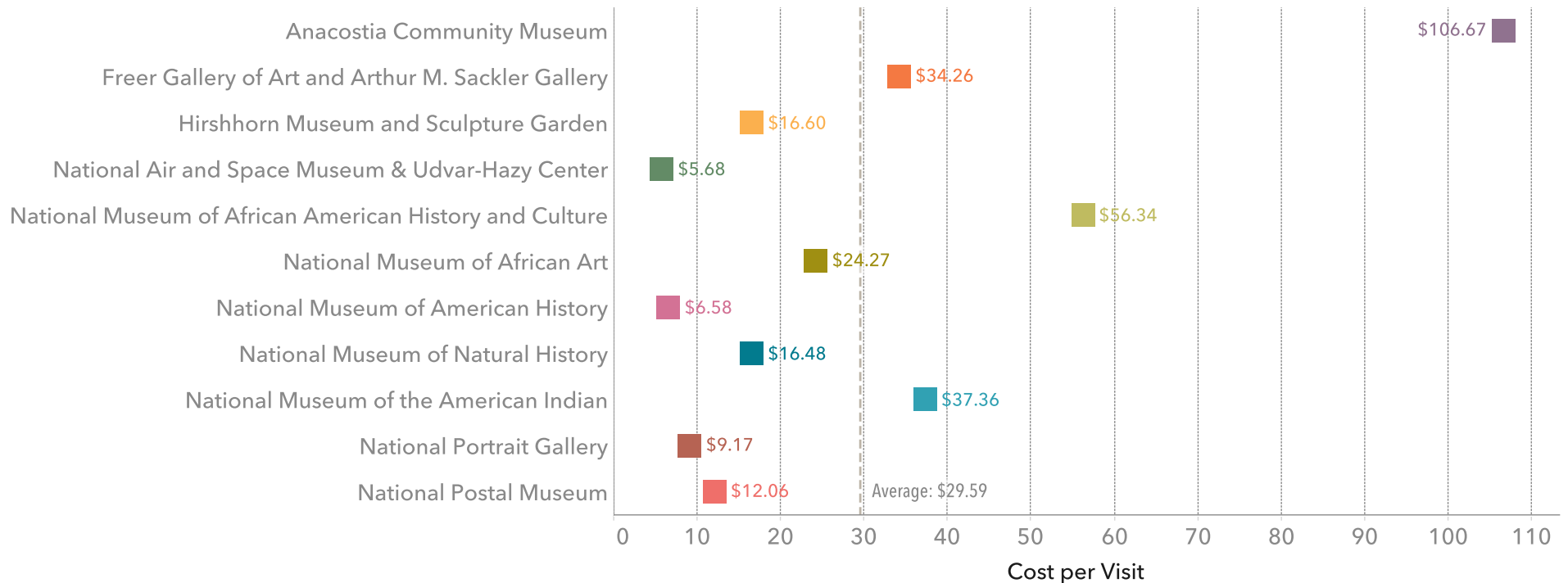
Average annual budget is **\$31.8M**.



The cost per visitor can be calculated using the total number of visitors per year divided by the annual budget.

CALCULATIONS

Fiscal Year 2016 (June 2016 - June 2017)



Average cost per visit is **\$29.59**.

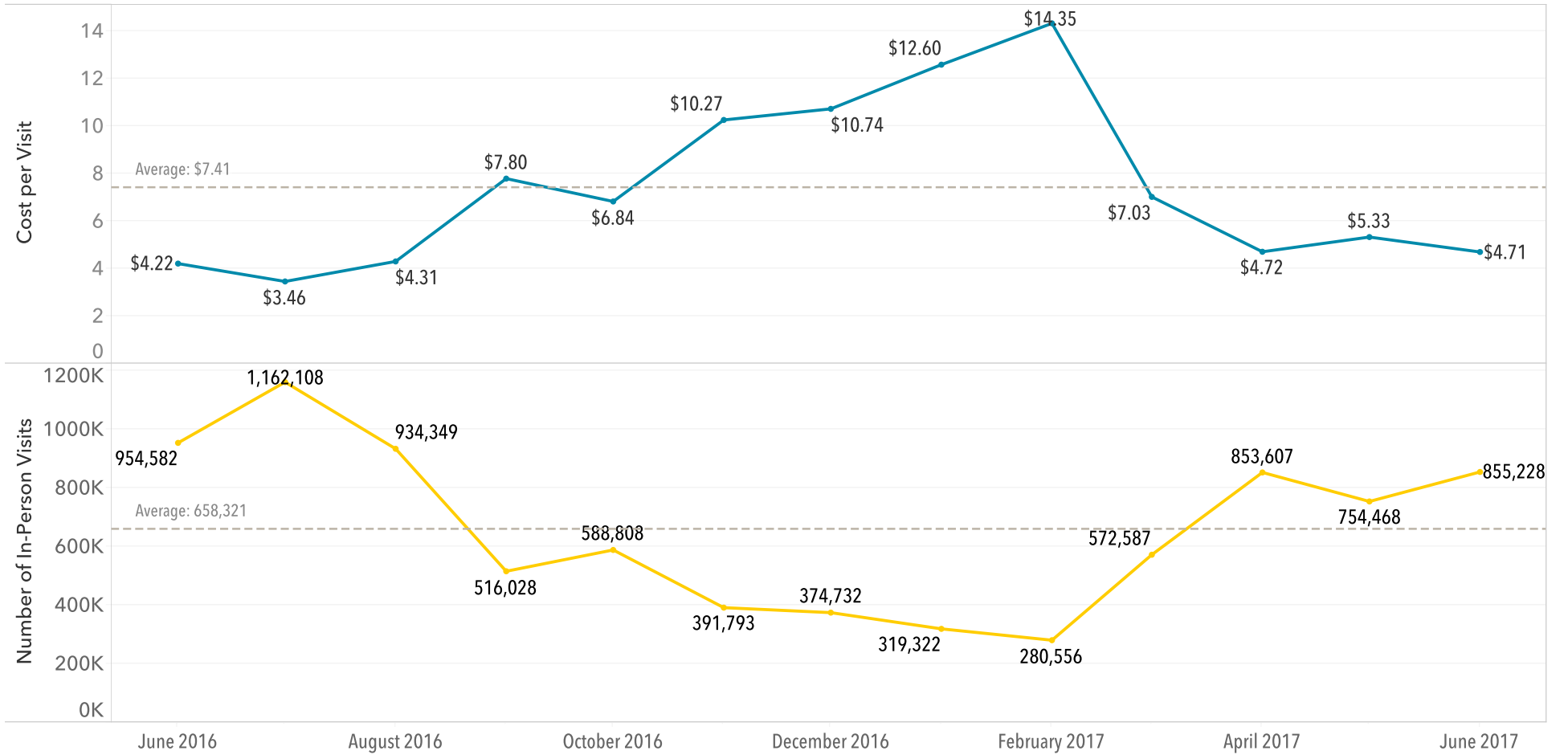
National Air and Space Museum also has the **lowest average cost per visitor** and Anacostia Community Museum has the highest.

The newly opened **National Museum of African American History and Culture** has the **second highest** average cost per visitor.

The cost per visit compared to the number of in person visits

CASE STUDY

National Air and Space Museum - 2016 Fiscal Year



CONCLUSIONS

Visitor trends and statistics are fascinating, particularly for the Smithsonian museums because they are free.

I learned a lot, but there is a lot more to learn.

Challenging to gather the data into one place, and figure out what calculations and conclusions could be drawn.

Want to compare non-Smithsonian museums as part of a larger data set.

