

# **Accessing & Mapping ACS Data**

## **Case Study: Private School Enrollment Rates**

**ACS Data Users Conference Pre-Meeting Workshop**

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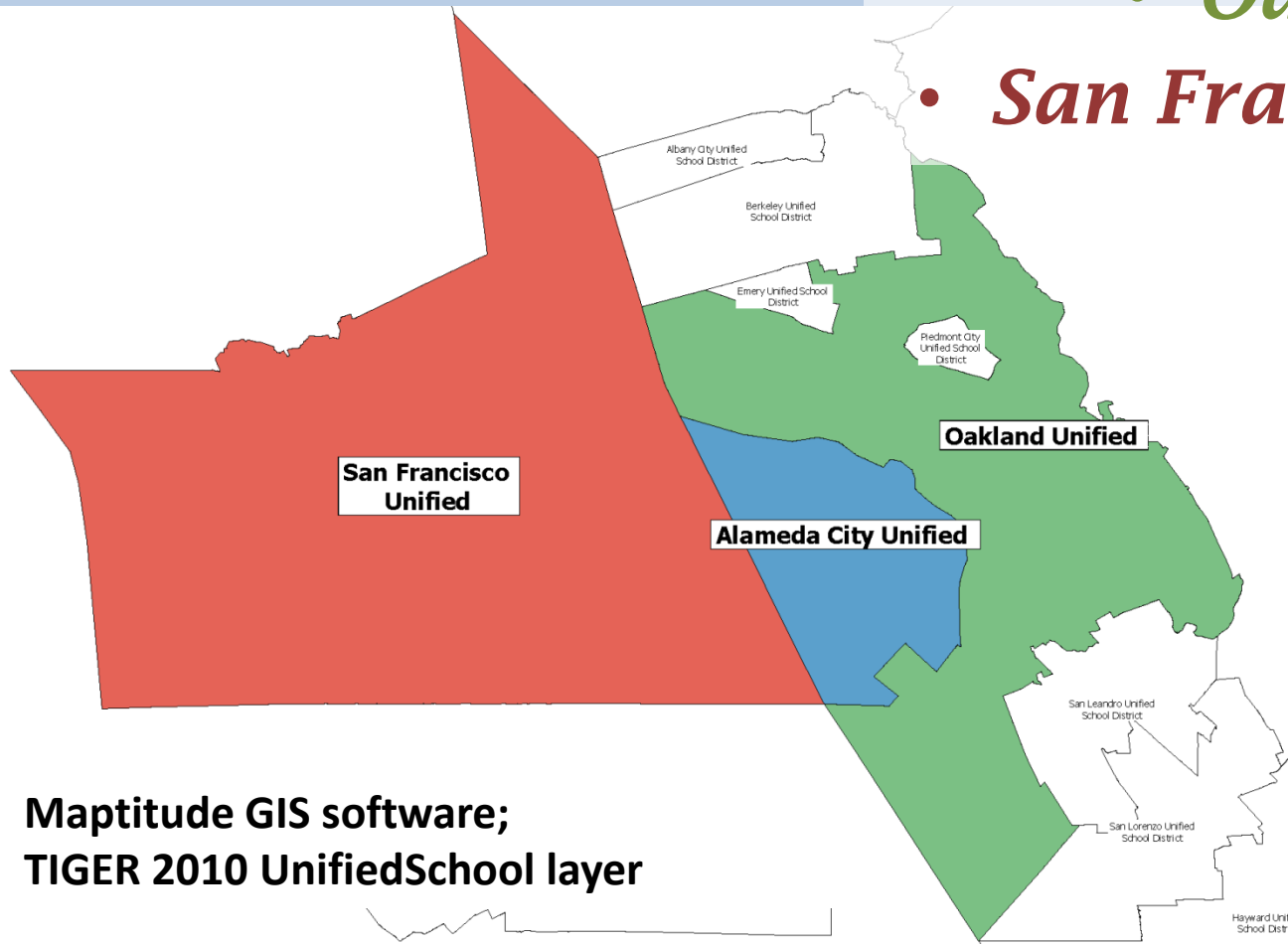
# *Agenda*

- *How to locate and download ACS estimates*
  - *Case Study: private school enrollment rates in three California K-12 school districts*
- *Preparing data for mapping*
- *Mapping example*
- *Conclusions*

# *Three school districts of interest*

## *San Francisco, CA, Bay Area Case Study*

- *Alameda City Unified*
- *Oakland Unified*
- *San Francisco Unified*



**Maptitude GIS software;  
TIGER 2010 UnifiedSchool layer**

*How do K-12 private school enrollment rates vary across these districts?*

*Which ACS release to use?*

- **One-year vs. five-year?**
  - **First, look at the error margins (MOEs), and then decide**
  - **For small geographical units like these, five-year is almost always better (and 10-year would be better to reduce MOEs!)**

*How do K-12 private school enrollment rates vary across these districts?*

*Where to find the information?*

## American FactFinder

[factfinder.census.gov](http://factfinder.census.gov)

### – Advanced Search

1. Choose database
2. Choose data table
3. Choose geographies
4. View table & check it's what you want

*How do K-12 private school enrollment rates vary across these districts?*

*How to download the information?*

- **“Save Query” option**
- **Download a .csv file (not a formatted Excel file)**
- **Note that the download will be zipped**

# *Web Break*

## **American FactFinder**

**<http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>**

*How do K-12 private school enrollment rates vary across these districts?*

*How to get the data ready for analysis and mapping?*

- Re-format downloaded .csv file
- Perform MOE calculations for aggregated gender + grade level population groups
- Perform MOE calculations for the proportions (percent enrolled in private school)



# Follow Census Bureau (Compass Guide) recommendations when aggregating estimates across geographic areas or population subgroups.

<http://www.census.gov/acs/www/Downloads/handbooks/ACSResearch.pdf>

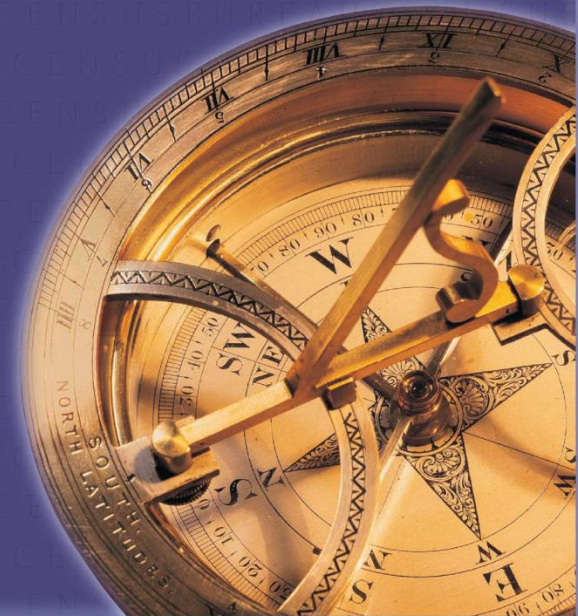
Excel file “calculator” available for download  
from

[http://www.statswmaryland.iupui.edu/topic/acs.  
asp](http://www.statswmaryland.iupui.edu/topic/acs.asp)

## A Compass for Understanding and Using American Community Survey Data

*What Researchers Need to Know*

Issued  
May 2009



U S C E N S U S B U R E A U

*Helping You Make Informed Decisions*

U.S. Department of Commerce  
Economic and Statistics Administration  
U.S. CENSUS BUREAU

United States  
**Census**  
2010

***How do K-12 private school enrollment rates vary across these districts?***

***How to get the data ready for mapping?***

- **Prepare an Excel file with**
  - All the essential geographic identifiers
  - All the fields needed for the map
  - No formulas
  - No special symbols

# Excel Break

## Now the fun begins!

GEO.display-label	Geography	Alameda City Unified School District, California	Oakland Unified School District, California	San Francisco Unified School District, California
HD01_VD01	Estimate, Total:	72381	382025	795068
HD02_VD01	Margin of Error, Total:	302	803	598
HD01_VD02	Estimate, Male:	34987	184812	403872
HD02_VD02	Margin of Error, Male:	859	1423	539
HD01_VD03	Estimate, Male - Enrolled in school:	9170	48021	82700
HD02_VD03	Margin of Error, Male - Enrolled in school:	581	1276	1482
HD01_VD04	Estimate, Male - Enrolled in school - Enrolled in nursery school, preschool:	1060	3323	5764
HD02_VD04	Margin of Error, Male - Enrolled in school - Enrolled in nursery school, preschool:	214	354	470
HD01_VD05	Estimate, Male - Enrolled in school - Enrolled in nursery school, preschool - Public school:	413	1716	1870
HD02_VD05	Margin of Error, Male - Enrolled in school - Enrolled in nursery school, preschool - Public school:	141	282	237
HD01_VD06	Estimate, Male - Enrolled in school - Enrolled in nursery school, preschool - Private school:	647	1607	3894
HD02_VD06	Margin of Error, Male - Enrolled in school - Enrolled in nursery school, preschool - Private school:	175	247	411
HD01_VD07	Estimate, Male - Enrolled in school - Enrolled in kindergarten:	532	2451	3186
HD02_VD07	Margin of Error, Male - Enrolled in school - Enrolled in kindergarten:	142	324	374
HD01_VD08	Estimate, Male - Enrolled in school - Enrolled in kindergarten - Public school:	457	2217	2233
HD02_VD08	Margin of Error, Male - Enrolled in school - Enrolled in kindergarten - Public school:	132	309	291
HD01_VD09	Estimate, Male - Enrolled in school - Enrolled in kindergarten - Private school:	75	234	953
HD02_VD09	Margin of Error, Male - Enrolled in school - Enrolled in kindergarten - Private school:	48	115	198
HD01_VD10	Estimate, Male - Enrolled in school - Enrolled in grade 1 to grade 4:	1635	9822	11542
HD02_VD10	Margin of Error, Male - Enrolled in school - Enrolled in grade 1 to grade 4:	240	659	529
HD01_VD11	Estimate, Male - Enrolled in school - Enrolled in grade 1 to grade 4 - Public school:	1403	8748	8364
HD02_VD11	Margin of Error, Male - Enrolled in school - Enrolled in grade 1 to grade 4 - Public school:	231	590	569
HD01_VD12	Estimate, Male - Enrolled in school - Enrolled in grade 1 to grade 4 - Private school:	232	1074	3178
HD02_VD12	Margin of Error, Male - Enrolled in school - Enrolled in grade 1 to grade 4 - Private school:	101	216	390
HD01_VD13	Estimate, Male - Enrolled in school - Enrolled in grade 5 to grade 8:	1503	8741	10562
HD02_VD13	Margin of Error, Male - Enrolled in school - Enrolled in grade 5 to grade 8:	260	652	540
HD01_VD14	Estimate, Male - Enrolled in school - Enrolled in grade 5 to grade 8 - Public school:	1382	7753	7676
HD02_VD14	Margin of Error, Male - Enrolled in school - Enrolled in grade 5 to grade 8 - Public school:	260	609	508
HD01_VD15	Estimate, Male - Enrolled in school - Enrolled in grade 5 to grade 8 - Private school:	121	988	2886
HD02_VD15	Margin of Error, Male - Enrolled in school - Enrolled in grade 5 to grade 8 - Private school:	58	167	344
HD01_VD16	Estimate, Male - Enrolled in school - Enrolled in grade 9 to grade 12:	1831	9638	11693
HD02_VD16	Margin of Error, Male - Enrolled in school - Enrolled in grade 9 to grade 12:	312	523	479
HD01_VD17	Estimate, Male - Enrolled in school - Enrolled in grade 9 to grade 12 - Public school:	1625	8485	9277
HD02_VD17	Margin of Error, Male - Enrolled in school - Enrolled in grade 9 to grade 12 - Public school:	297	542	500
HD01_VD18	Estimate, Male - Enrolled in school - Enrolled in grade 9 to grade 12 - Private school:	206	1153	2316
HD02_VD18	Margin of Error, Male - Enrolled in school - Enrolled in grade 9 to grade 12 - Private school:	105	233	303
HD01_VD19	Estimate, Male - Enrolled in school - Enrolled in college undergraduate years:	2028	11068	28465
HD02_VD19	Margin of Error, Male - Enrolled in school - Enrolled in college undergraduate years:	359	620	1039
HD01_VD20	Estimate, Male - Enrolled in school - Enrolled in college undergraduate years - Public school:	1787	9388	22944
HD02_VD20	Margin of Error, Male - Enrolled in school - Enrolled in college undergraduate years - Public school:	330	786	1014
HD01_VD21	Estimate, Male - Enrolled in school - Enrolled in college undergraduate years - Private school:	241	1682	5521
HD02_VD21	Margin of Error, Male - Enrolled in school - Enrolled in college undergraduate years - Private school:	108	398	636
HD01_VD22	Estimate, Male - Enrolled in school - Enrolled in graduate or professional school:	581	2978	11588
HD02_VD22	Margin of Error, Male - Enrolled in school - Enrolled in graduate or professional school:	169	405	855
HD01_VD23	Estimate, Male - Enrolled in school - Enrolled in graduate or professional school - Public school:	355	1797	5902
HD02_VD23	Margin of Error, Male - Enrolled in school - Enrolled in graduate or professional school - Public school:	138	315	638
HD01_VD24	Estimate, Male - Enrolled in school - Enrolled in graduate or professional school - Private school:	226	1181	5696
HD02_VD24	Margin of Error, Male - Enrolled in school - Enrolled in graduate or professional school - Private school:	98	242	649
HD01_VD25	Estimate, Male - Not enrolled in school:	25817	136791	321172
HD02_VD25	Margin of Error, Male - Not enrolled in school:	600	1649	1382

From this  
To this

	Values	MOE	Percent MOE		
<b>Alameda - total K-12</b>	<b>10,829</b>	<b>707.63</b>	<b>100.0%</b>	<b>-</b>	<b>± 0.00%</b>
<b>Private K-12</b>	<b>1,515</b>	<b>285.03</b>	<b>14.0%</b>	<b>0.025</b>	<b>± 2.5%</b>
<b>Oakland - total K-12</b>	<b>60,276</b>	<b>1580.25</b>	<b>100.0%</b>	<b>-</b>	<b>± 0.00%</b>
<b>Private K-12</b>	<b>6,748</b>	<b>514.35</b>	<b>11.2%</b>	<b>0.008</b>	<b>± 0.80%</b>
<b>SFUSD - total K-12</b>	<b>72,808</b>	<b>1387.95</b>	<b>100.0%</b>	<b>-</b>	<b>± 0.00%</b>
<b>Private K-12</b>	<b>18,562</b>	<b>870.36</b>	<b>25.5%</b>	<b>0.011</b>	<b>± 1.1%</b>

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*How to use the data for maps?*

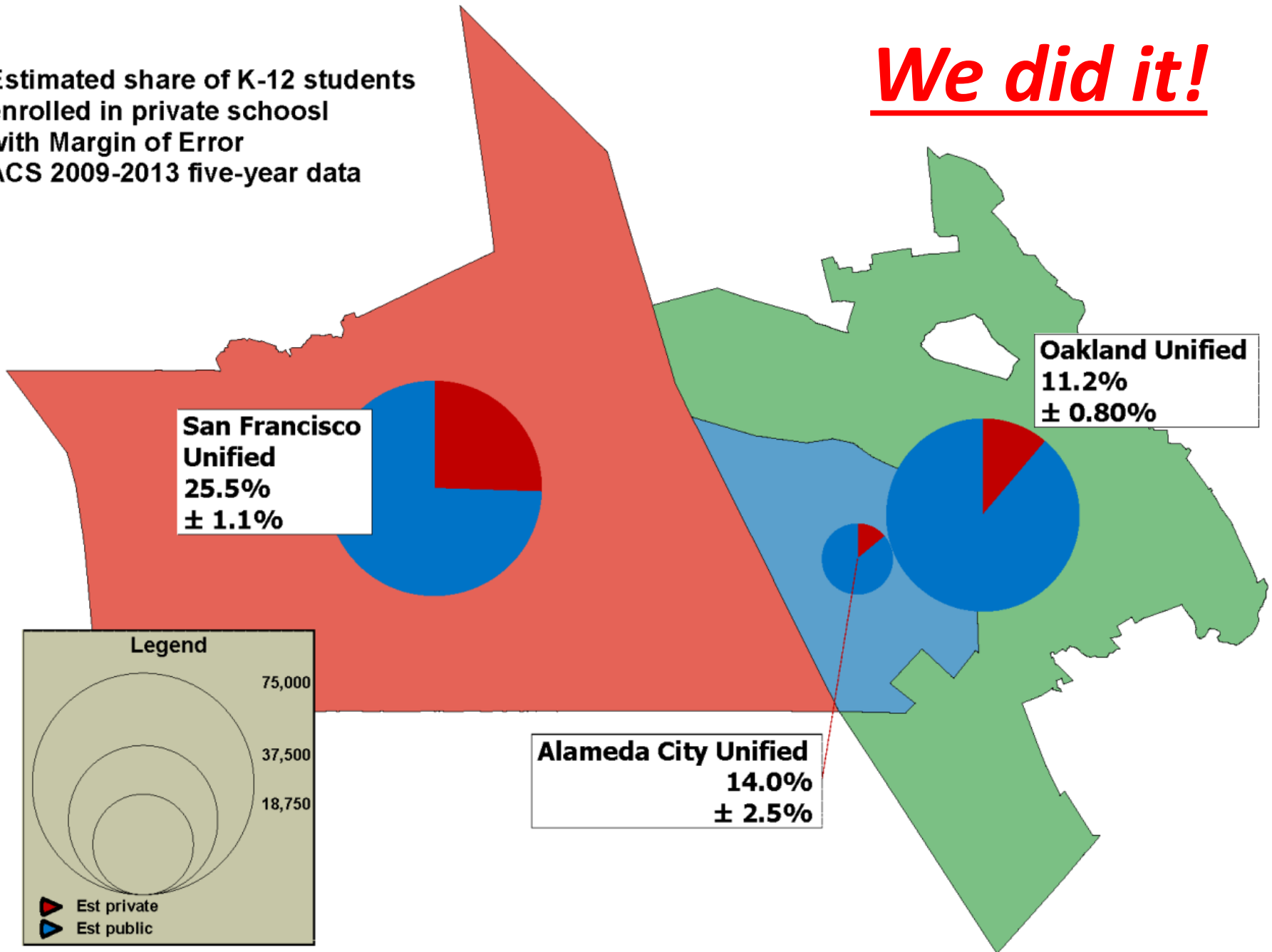
- **Open streamlined database in GIS program**
- **Join database to Tiger layer, using FIPS codes (be sure they are consistent)**
- **Check to see that all your cases joined**
- **Create maps!**

# *GIS Break*

**Maptitude**  
Geographic Information System

Estimated share of K-12 students enrolled in private schools with Margin of Error  
ACS 2009-2013 five-year data

**We did it!**



# Conclusions

*ACS estimates can be downloaded from American FactFinder and then mapped.*

*But it's really complicated to use the ACS estimates properly if you're going to combine population groups or geographies (and even if you're not).*

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