

**Exhibit 1**

Declaration of John A. Safarli in Support of City's Reply

*Glatt v. City of Pasco, et al.*

No. 4:16-CV-05108-LRS

**FIRST SUPPLEMENTAL REPORT OF PETER A. MORRISON, Ph.D.***Glatt v. City of Pasco, et al.*

No. 4:16-CV-05108-LRS

1. This report documents the supporting evidence on which I base my opinion that Defendants' approved plan assures Latinos in the City of Pasco the ability to elect at least three favored candidates of choice by district. I have no doubt that the plan creates three such Latino "opportunity districts."
2. My supporting evidence consists of: (1) Latinos' clear majority share of the eligible voters in Districts 1, 2, and 6 of the plan, as shown by the most current 5-year data from American Community Survey; and (2) Latinos' clear majority share of the registered voters in Districts 1, 2, and 6, as shown by the current presence of registrants with Spanish surnames as of October, 2016. The following sections provide full technical detail pertaining to each component of supporting evidence.

**Eligible Voter Population**

3. This evidence is detailed in my expert report dated October 15, 2016, which was submitted as Exhibit 13 to Defendants' initial filing. I have reproduced Table 1 from that report below:

**Table 1**

<b>Plan M8</b>				
<b>District</b>	<b>Total CVAP (2010-14)</b>	<b>Hispanic CVAP</b>	<b>Total Pop (2010)</b>	<b>% Hispanic CVAP</b>
1	3,148	1,701	10,048	54.0%
2	3,488	1,825	10,009	52.3%
3	7,828	2,136	10,532	27.3%
4	6,535	1,542	10,062	23.6%
5	7,744	1,007	11,003	13.0%
6	3,998	2,239	10,798	56.0%
<b>Total</b>	<b>32,742</b>	<b>10,450</b>	<b>62,452</b>	<b>31.9%</b>
<i>Total deviation from ideal:</i>				<b>9.55%</b>
<small>Note: Equalizes 2010 population (census enumerated) within 2016 city limits.</small>				

\*Note: The CVAP and Hispanic CVAP figures are based on the 2010-2014 5-year ACS estimate. The recently-released 2015 1-year ACS estimate shows that Latinos are now 38.5% of the citywide CAP, a nearly 7.0% increase from the 2010-2014 5-year ACS estimate.

4. For the City of Pasco (based 2016 city limits, including annexations to date), District 1 has a population of 3,148 eligible voters, of whom 54.0% are Latino. District 2 has a population of 3,488 eligible voters, of whom 52.3% are Latino. District 6 has a population of 3,998 eligible voters, of whom 56.0% are Latino. Latinos constitute the clear majority of eligible voters in these three districts, based on the most current available American Community Survey data (the 2010-2014 5-year file) for census block groups.
5. Based on the 2010-2014 5-year ACS estimate, Latinos are 31.9% of the citywide eligible voter population. However, the ACS released the 2015 1-year estimate, which shows that the Latino citywide eligible voter share is now 38.5%. The 2015 1-year estimate can and should be used as the most accurate estimate of the Latino citywide eligible voter share (although it is not published for any subparts of the city). According to the U.S. Census Bureau's own guidelines, 1-year estimates are suitable for areas with populations of 65,000. *See* "When to Use 1-year, 3-year, or 5-year Estimates," available at <http://www.census.gov/programs-surveys/acs/guidance/estimates.html> (a copy is attached to this report). The City's population is currently more than 65,000, as shown by the 2010-2014 5-year ACS estimate (65,858) and the State of Washington's Office of Financial Management's official estimate from April 1, 2016 (70,560).
6. Not only does the 2015 1-year estimate provide the most recent estimate of the Latino share of the eligible voter population, but the estimate also accounts for Pasco's city limits as of 2015, which the 2010-2014 5-year ACS estimate does not account for.

#### **Registered Voter Population**

7. To calculate the Latino share of registered voters (both within each district and citywide), I obtained the source list of registered voters from the Election Department of the Franklin County Auditor's Office. This source list is current and accurate as of mid-October 2016.
8. To determine the number of Latino registered voters in each district, each registrant was geocoded based on the address of residence. Geocoding assigns each registrant to the exact

latitude and longitude of that residential address. This exact position shows which voting district the registrant resides in.

9. I further identified those registrants with Spanish surnames by matching each registrant's surname against the US Census Bureau's official dictionary of 12,497 surnames for identifying persons of probable Hispanic origin.<sup>1</sup> This matching process established how many registered voters in each district had Spanish surnames, as well as how many registered voters throughout the entire City had Spanish surnames. I was then able to calculate the Spanish-surname share as a percentage in each district and citywide. In each of the three districts where Latinos are a majority of the eligible voter population, they are also a majority of the registered voter population as measured by Spanish surname (see Table 2 below).<sup>2</sup> Additionally, Latinos are 31.8% of the City's entire registered voter population, measured by Spanish surname.

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<sup>1</sup> The US Census Bureau has developed a dictionary for identifying persons of probable Hispanic origin (Passel and Word, 1980). This dictionary is unique in that it has undergone thorough evaluation: its detection characteristics are well understood, and its limitations have been carefully documented. For further technical details, see Appendix.

<sup>2</sup> I computed a "%Hispanic" analytic measure to compare false positives and negatives. This process is described in the Appendix.

Table 2

<b>PLAN M8</b>				
<b>District</b>	<b>Current Registered Voters (10/2016)</b>			
	<b>Total No.</b>	<b>Spanish Surnamed</b>	<b>% Spanish Surnamed</b>	<b>% Hispanic</b>
1	2,297	1,359	59.2%	<b>58.5%</b>
2	2,393	1,574	65.8%	<b>61.6%</b>
3	7,575	1,733	22.9%	41.4%
4	5,110	1,109	21.7%	40.9%
5	6,817	1,090	16.0%	38.2%
6	2,443	1,614	66.1%	<b>61.7%</b>
<b>Total</b>	<b>26,635</b>	<b>8,479</b>	<b>31.8%</b>	<b>45.6%</b>
Source: Franklin County Elections Department. "Spanish-surnamed" are registered voters whose surnames appear on US Census Bureau's dictionary of 12,497 surnames for identifying persons of probable Hispanic origin. "% Hispanic" corrects "% Spanish Surnamed" for net effect of false positives and false negatives.				

I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 15, 2016



Peter A. Morrison, Ph.D.

## **APPENDIX**

Demographers use surname dictionaries to identify the membership of particular racial and ethnic communities within a population. Insofar as a particular surname belongs uniquely to a particular (racial, ethnic, national origin) group, it is possible to identify its holder's probable membership in the group by using well-formulated surname dictionaries. Such dictionaries now exist for identifying Hispanics and various Asian nationalities (see Abrahamse, Morrison, and Bolton, 1994; Lauderdale and Kestenbaum, 2000; Perkins, 1993).

The surname analysis used here to identify Hispanic ethnicity has been peer reviewed (see Abrahamse, Morrison, and Bolton, 1994) and relies on the Census Bureau's full list of 12,497 Spanish surnames for identifying persons of probable Hispanic origin (see Passel and Word, 1980). That list has well-documented detection characteristics (Perkins, 1993), which strengthen any statistical application of surnames as used here to classifying registered voters by ethnicity.

In the State of Washington, for example, one can estimate the number of registrants who are Hispanic by counting the number who have Spanish surnames and then correcting that raw number for the net effect of "false positives" and "false negatives," derived from Perkins, 1993, Table 3 (access at: <https://www.census.gov/population/www/documentation/twps0004.html>) . This correction is necessary because there are slightly more self-identified Hispanics with a non-Spanish surname (e.g., Hispanic females married to non-Hispanic males) than self-identified non-Hispanics with a Spanish surname (e.g., non-Hispanic females married to Hispanic males).<sup>3</sup>

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<sup>3</sup> Not every Spanish-surnamed person self-identifies on the decennial census as Hispanic; conversely, not every self-identified Hispanic persons has a Spanish surname. Accordingly, any list of names used as a basis for inferring Hispanic ethnicity creates two types of errors: (1) "false positives," whereby a non-Hispanic person gets classified as "Hispanic" because his or her surname happens to be on the Census Bureau List of 12,497 Spanish Surnames; and (2) "false negatives," whereby an Hispanic person gets classified as "non-Hispanic" because his or her name is not listed. Such misclassifications arise for various reasons. For example, a woman may relinquish her maiden Hispanic surname or acquire an Hispanic surname from her husband.

The specific correction factors I use are those for the State of Washington: SOM=30.67 and SCOM=22.34%. For Pasco (a city within the State of Washington), these rates enable me to derive the implied number of self-identified Hispanics among the population of registered voters.

## **REFERENCES**

Abrahamse, A. F., P. A. Morrison, and N. B. Minter. 1994. "Surname Analysis for Estimating Local Concentration of Hispanics and Asians," *Population Research and Policy Review*, 1994.

Lauderdale, Diane and Bert Kestenbaum. 2000. "Asian American Ethnic Identification by Surname," *Population and Development Review* 19 (3), pp. 283-300.

Passel, J. S. and Word, D. L. 1980. "Constructing the List of Spanish Surnames for the 1980 Census: An Application of Bayes' Theorem," presented at the 1980 Population Association of America meetings, Washington.

Perkins, R. C. 1993. *Evaluating the Passel-Word Spanish Surname List: 1990 Decennial Census Post Enumeration Survey Results*. US Census Bureau, Population Division, Technical Working Paper No. 4.

US Census Bureau. 1980. Census of Population and Housing, 1980. *Spanish Surname List Technical Documentation*, prepared by Data Access and User Staff, Data User Services Division.





## American Community Survey (ACS)

### When to Use 1-year, 3-year, or 5-year Estimates

Choosing which dataset involves more than simply considering the population size in your area. You must think about the balance between currency and sample size/reliability/precision.

For details, research implications, and examples, see "Understanding and Using ACS Single-Year and Multiyear Estimates," page 9 in General Data Users Handbook.

#### Distinguishing features of ACS 1-year, 1-year supplemental, 3-year, and 5-year estimates

1-year estimates	1-year supplemental estimates	3-year estimates*	5-year estimates
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12 months of collected data	12 months of collected data	36 months of collected data	60 months of collected data
<p><i>Example:</i></p> <p>2015 ACS 1-year estimates</p> <p><i>Date collected between:</i></p> <p>January 1, 2015 and December 31, 2015</p>	<p><i>Example:</i></p> <p>2015 ACS 1-year supplemental estimates</p> <p><i>Date collected between:</i></p> <p>January 1, 2015 and December 31, 2015</p>	<p><i>Example:</i></p> <p>2011-2013 ACS 3-year estimates</p> <p><i>Date collected between:</i></p> <p>January 1, 2011 and December 31, 2013</p>	<p><i>Example:</i></p> <p>2011-2015 ACS 5-year estimates</p> <p><i>Date collected between:</i></p> <p>January 1, 2011 and December 31, 2015</p>
Data for areas with populations of 65,000+	Data for areas with populations of 20,000+	Data for areas with populations of 20,000+	Data for all areas
Smallest sample size	Smallest sample size	Larger sample size than 1-year	Largest sample size
Less reliable than 3-year or 5-year	Less reliable than 5-year	More reliable than 1-year; less reliable than 5-year	Most reliable

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Most current data	Most current data	Less current than 1-year estimates; more current than 5-year	Least current
Annually released: 2005-present	Annually released: 2014-present	Annually released: 2007-2013	Annually released: 2009-present
Best used when	Best used when	Best used when	Best used when
Currency is more important than precision Analyzing large populations	Currency is more important than precision Analyzing smaller populations Examining smaller geographies because the standard 1-year estimates are not available	More precise than 1-year, spans fewer years than 5-year Analyzing smaller populations Examining smaller geographies because the standard 1-year estimates are not available	Precision is more important than currency Analyzing very small populations Examining tracts and other smaller geographies because 1-year estimates are not available

\*ACS 3-year estimates have been discontinued. The 2005-2007, 2006-2008, 2007-2009, 2008-2010, 2009-2011, 2010-2012 and 2011-2013 ACS 3-year estimates will remain available to data users, but no new 3-year estimates will