UNITED STATES DISTRICT COURT FOR THE MIDDLE DISTRICT OF ALABAMA EASTERN DIVISION

THE STATE OF ALABAMA; ROBERT ADERHOLT, Representative for Alabama's 4th Congressional District, in his official and individual capacities; WILLIAM GREEN; and CAMARAN WILLIAMS,

Plaintiffs,

v.

UNITED STATES DEPARTMENT OF COMMERCE; GINA RAIMONDO, in her official capacity as Secretary of Commerce; UNITED STATES BUREAU OF THE CENSUS, an agency within the United States Department of Commerce; and RON JARMIN, in his official capacity as Acting Director of the U.S. Census Bureau,

Defendants.

CIVIL ACTION NO. 3:21-cv-211-RAH-ECM-KCN

BRIEF OF *AMICI CURIAE* STATE OF UTAH AND 15 OTHER STATES IN SUPPORT OF PLAINTIFFS

INTRODUCTION

The States of Utah, Alaska, Arkansas, Florida, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, New Mexico, Ohio, Oklahoma, South Carolina, Texas, and West Virginia (*Amici* States) agree with Plaintiffs that the Secretary's intended use of differential privacy deprives states of accurate "[t]abulations of population" of state subparts to use in legislative apportionment and districting under 13 U.S.C. § 141(c). *Amici* States also agree that the Secretary can comply with the privacy requirements of 13 U.S.C. § 9 by alternative methods that do not deprive the states of the numbers to which section 141 entitles them. They submit this *amicus* brief to explain the detrimental effects that using the differential privacy method would have on both redistricting and administering state and federal programs.

ARGUMENT

I. Utah's analysis of the 2010 demonstration data shows that differential privacy will result in inaccurate 2020 subpopulation data affecting redistricting and state and federal program funding.

In October 2019, the Census Bureau released demonstration data to permit states to review the effects of differential privacy. *See* 2010 Demonstration Data Products, https://www.census.gov/programs-surveys/decennial-census/2020-census/planning-management/2020-census-data-products/2010-demonstration-data-products.html. The demonstration data included the census data from 2010 that was treated with the new differential privacy method. *Id.* Using a mathematical model, the Census Bureau injects "noise"—false information—into the raw data to minimize the risk of privacy disclosure. *Id.* The Utah State Legislature analyzed the 2010 demonstration data, comparing it with the previously received 2010 redistricting data and sent its findings to the Census Bureau. *See* Letter of the Utah State Legislature (Feb. 13, 2020), https://www.ncsl.org/Portals/1/Documents/Redistricting/UT_Differential_Privacy_%28Signed%29.pdf.

The Utah State Legislature identified three major harms from using differential privacy for census data. *Id.* at 1. *First*, it would make accurate redistricting at the local level impossible. The analysis showed that when differential privacy was applied to the 2010 data, there was a statewide net loss of nearly 15,000 people from Utah's cities and towns, including two cities that lost 50% of their populations. *Id.* Indeed, with inaccurate subpopulation data, the State would be unable to accurately receive and distribute funds to localities. Like many states, Utah has state revenue-sharing statutes and receives federal funding based on population formulas derived from census data. Inaccurate data would "impact state and federal funding that is disbursed in compliance with" those statutes and formulas. *Id.* at 1.

Second, inaccurate data could "adversely affect longitudinal studies about health, safety and welfare." *Id.* If the academic and professional policy analyses that legislators rely on to inform public policy decisions were based on inaccurate data, the Legislature could no longer rely on them, and would have to essentially legislate in the dark. *Id.* And *third*, because of the population shifts, the Utah Legislature expressed concerns that the State would not be able to fulfill its constitutional obligation to satisfy population and equality requirements in redistricting. *Id.* at 2.

These concerns remained even after the Census Bureau tweaked the data. The Bureau released additional sets of demonstration data in May 2020, September 2020, and November 2020, modifying the amount of injected "noise" with each dataset. *See* https://www.ncsl.org/research/redistricting/differential-privacy-for-census-data-explained.aspx. The Utah Legislature analyzed the November 2020 data in the same way it had analyzed the modified 2010 data. *See* Differential Privacy, Utah State Legislature (March 2021) ("2021 Utah Report") (attached at Exh. 1). While it saw an improvement from the October 2019 to the November 2020 demonstration data, it did not cure the population inaccuracies. For example, Congressional districts three and four had populations increase and decrease by nearly 50 voters, respectively, *id*. at 32—significantly higher than the one-person-one-vote principle requiring states to draw legislative districts that are nearly equivalent in population. *See Evenwel v. Abbott*, 136 S. Ct. 1120, 1123-24 (2016).

As with its analysis of the modified 2010 data, the Utah Legislature's concerns with the November 2020 data went beyond redistricting. The Utah Legislature observed that while the November 2020 data improved, there remained "some significant population changes, particularly in rural municipalities." 2021 Utah Report, Exh. 1 at 1. Specifically, several cities suffered a population decrease of over 30%. *Id.* at 13. And inaccurate data would translate to lost funding for those

communities. For example, in FY2017, Utah received $9 billion from census-guided federal funding. *See* Andrew Reamer, Counting for Dollars 2020: The Role of the Decennial Census in the Geographic Distribution of Federal Funds, Brief 7: Comprehensive Accounting of Census-Guided Federal Spending (FY2017): Part B: State Estimates at 3, https://perma.cc/MUP5-6KJ5. Nationwide, $1.5 trillion was distributed through 316 federal spending programs on 2010 census-derived data. *Id.* at 1. Thus, like Utah, inaccurate subpopulation data will harm distribution of census-guided funding in all states.

II. Other states' analyses also recognize the harm differential privacy will inflict on rural areas and minority racial groups.

Utah is not alone in its concerns about redistricting, funding, and data accuracy. All states use census data to redistrict, obtain and distribute federal funds, and administer many state and local programs. Because differential privacy creates false information—by design—it prevents the states from accessing municipal-level information crucial to performing this essential government functions. And the distorting impact of differential privacy will likely fall hardest on some of the most vulnerable populations—rural areas and minority racial groups. *See* National Conference of State Legislatures, *Differential Privacy for Census Data Explained*, Mar. 15, 2021, available at https://www.ncsl.org/research/redistricting/differential-privacy-for-census-data-explained.aspx.

As one University of Virginia researcher explained in a letter to Governor Northam, skewing minority group data is particularly problematic when a State must accommodate majority-minority districts. *See* Memorandum from Meredith Strohm Gunter to Hon. Ralph Northam, Jan. 23, 2020, available at https://www.ncsl.org/Portals/1/Documents/Redistricting/VA_CensusDistortionProgram_VAGovernor_2020-01-23.pdf. Because the "noise-injected proxy" would change the "actual size of the voting age population in each census block" as well as its racial

characteristics, "[m]ajority-minority districts could lose their status" or a non-minority-majority district might mistakenly have majority-minority status conferred upon it. *Id.*

California's leaders recently sent a letter to the White House Chief of Staff expressing concerns that inaccuracies introduced by differential privacy would "hamper the ability of states and localities to establish political districts that comply with the United States Constitution's 'one-person, one-vote' principle and with the protections of the Voting Rights Act of 1965." Feb. 2021 Letter from California leaders to Ronald Klain, available at https://www.ncsl.org/Portals/1/Documents/Redistricting/California_Differential_Privacy_summary2021.pdf. A joint analysis from Asian Americans Advancing Justice and Mexican American Legal Defense and Educational Fund explained that this would likely lead to minorities being underrepresented. *See* Preliminary Report: Impact of Differential Privacy & the 2020 Census on Latinos, Asian Americans, and Redistricting, available at https://advancingjustice-aajc.org/report/preliminary-report-impact-differential-privacy-2020-census-latinos-asian-americans.

Other states also shared concerns about funding equity for localities and data accuracy. As the Virginia researcher explained, myriad state programs—from housing and transportation to emergency management—rely on accurate data to deliver state services to those who need it. https://www.ncsl.org/Portals/1/Documents/Redistricting/VA_CensusDistortionProgram_VA-Governor_2020-01-23.pdf. And legislators rely on census-derived statistics to calibrate programs for those in need. *Id.*

Two officials from Maine—its state economist and data center lead—expressed similar concerns in a letter to the Census Bureau's director, explaining that their analysis showed that "small, rural places suffer the most" from inaccurate estimates." Feb. 20, 2020 Letter to Steven

Dillingham, available at https://www.ncsl.org/Portals/1/Documents/Redistricting/ME_Letter_to_Census_on_differential_privacy_concerns_Maine_SDC.pdf. Washington State's state demographer wrote a similar letter to the Bureau's director about the outsized impact that rural areas would suffer under differential privacy, saying that the data would be "unusable for large parts of" the state and skew funding away from small towns. Feb. 6, 2020 Letter to Steven Dillingham, https://www.ncsl.org/Portals/1/Documents/Redistricting/WA_OFM_DAS_Response_Letter.pdf. He found the error rate "alarmingly high" and "extremely problematic" for state functions. *Id.* The Colorado General Assembly echoed similar redistricting, funding, and data accuracy concerns to those of other states—though in their analysis, the data skewed in favor of rural areas. *See* June 1, 2020 Letter to Steven Dillingham, available at https://www.ncsl.org/Portals/1/Documents/Elections/CO_State_Legislative_Leadership_Letter.pdf?ver=2020-08-04-132435-780&timestamp=1596569177678.

Finally, demographic researchers from the University of California Riverside and the University of Washington did four case studies using data from Alaska to illustrate just how strange the local-level results of using differential privacy can be. They found that three population blocks included several children and no adults; 1,252 voting blocks switched from having one or more persons of voting age to having no persons of voting age; 830 blocks went the other way, from having no persons of voting age to having at least one; and that 96% of blocks (12,366 of 12,870) with one or more inhabitants showed a different number of persons. Population Association of America, *The Effect of Differential Privacy Disclosure Avoidance System Proposed by the Census Bureau on 2020 Census Products: Four Case Studies of Census Blocks in Alaska*, available at https://www.populationassociation.org/blogs/paa-web1/2021/03/30/the-effect-of-the-differential-privacy-disclosure.

Amici States share concerns that the Bureau's proposed use of differential privacy will harm State redistricting, funding, and data collection. This in turn will harm all the States' citizens, but the burden will fall disproportionately on minorities and rural areas. This Court should rule in favor of the Plaintiffs.

Dated: April 9, 2021

Respectfully submitted,

/s/ Ryan J. Hebson

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CERTIFICATE OF SERVICE

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Exhibit 1

[*Differential Privacy, Utah State Legislature (March 2021)*]

Differential Privacy

Introduction | March 2021

Differential Privacy is a term used by the U.S. Census Bureau to describe a privacy technique that scrambles census data at the census block level in order to protect the personally identifiable information of census respondents. Although the Census Bureau has used privacy techniques since 1970, it has never used a privacy technique that alters data as much as differential privacy.

U.S. Census Bureau

In addition to conducting a complete and accurate enumeration of the United States every 10 years, the Census Bureau is also required by federal law to keep all personally identifiable information collected during the census, such as age, race, gender, marital status, etc., confidential.

Privacy Techniques Cracked

Using other public data sets, complex algorithms, and super computers, it is possible for big data miners to reconstruct personally identifiable information from the census data.

New Privacy Strategy

During the 2020 census, the Census Bureau intends to implement differential privacy for the first time. The Census Bureau reports that this technique is mathematically proven to protect personally identifiable information.

Privacy v. Accuracy

The more privacy the Census Bureau protects, the less accurate the enumeration becomes. Less accurate data creates three concerns:

- State and local redistricting will be based on incorrect census block data;
- Distribution of federal and state monies may not reflect the actual population of the recipient municipalities;
- Academics, professional researchers, and policy analysts will make future policy recommendations regarding the health, safety, and welfare of individuals and the economy on inaccurate information.

Demonstration Data: October 2019 Version and November 2020 Version

In this report, we refer to the Census Bureau's October 29, 2019 release of demonstration data as the "October Version" and the November 16, 2020 release as the "November Version." This report compares the differences that these two versions of differential privacy have on the populations within House, Senate, and Congressional districts and within the state's counties and municipalities, using the 2010 census data. The following maps and tables demonstrate how these two versions would have affected the 2010 census data.

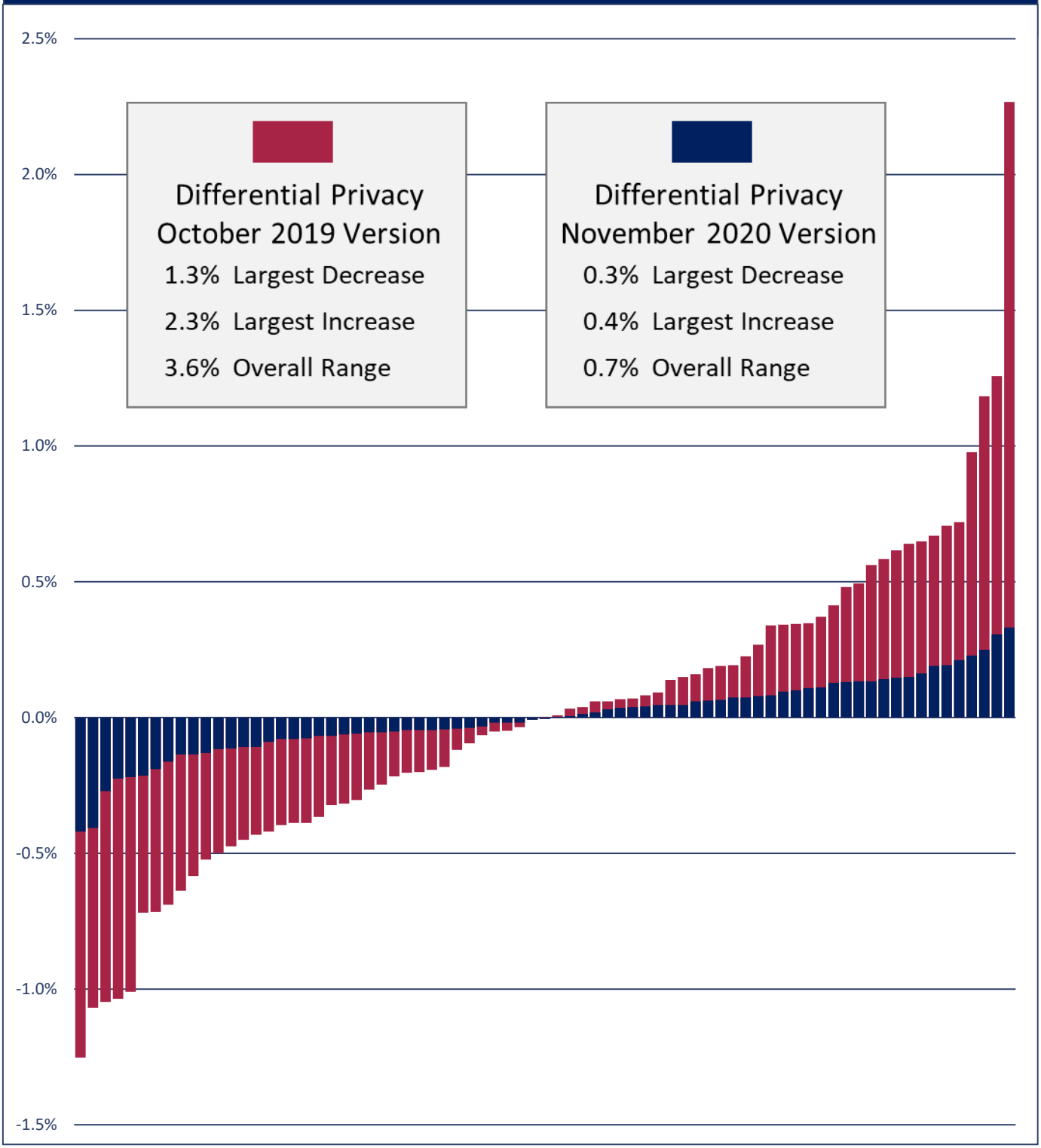
Conclusion

Although the information in this report does not predict variances in future census data, it does demonstrate how differential privacy techniques would have changed the 2010 census data. We conclude that although the November 2020 version represents a significant improvement over the October 2019 version, we still notice some significant population changes, particularly in rural municipalities. We also note that all population variances noted in this report are in addition to the unknown variances that were applied to the data by the Census Bureau.

Differential Privacy

House Districts

Differential Privacy Applied to 2010 House District Populations



Differential Privacy

House Districts

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Differential Privacy Applied to 2010 House District Populations

Key to Colors

- Less than -1.00%
- -1.00% to -0.40%
- -0.40% to 0%
- 0% to 0.40%
- 0.40% to 1.00%
- Greater than 1.00%

October 2019 Version				November 2020 Version			
District	2010 Redistricting Population	Number	Percent	District	2010 Redistricting Population	Number	Percent
11	36,871	-462	-1.25%	16	36,850	-155	-0.42%
29	36,853	-394	-1.07%	48	36,842	-150	-0.41%
43	36,857	-386	-1.05%	29	36,853	-100	-0.27%
74	36,874	-382	-1.04%	18	36,852	-83	-0.23%
21	36,832	-372	-1.01%	75	36,860	-81	-0.22%
40	36,855	-265	-0.72%	5	36,876	-79	-0.21%
6	36,851	-264	-0.72%	43	36,857	-70	-0.19%
56	36,852	-254	-0.69%	71	36,859	-60	-0.16%
30	36,858	-235	-0.64%	64	36,846	-50	-0.14%
64	36,846	-215	-0.58%	65	36,848	-50	-0.14%
13	36,859	-193	-0.52%	24	36,852	-48	-0.13%
44	36,847	-184	-0.50%	52	36,841	-43	-0.12%
67	36,859	-175	-0.47%	51	36,853	-42	-0.11%
14	36,873	-166	-0.45%	40	36,855	-40	-0.11%
34	36,851	-159	-0.43%	25	36,856	-40	-0.11%
35	36,860	-155	-0.42%	10	36,870	-33	-0.09%
45	36,856	-146	-0.40%	36	36,843	-29	-0.08%
51	36,853	-143	-0.39%	31	36,852	-29	-0.08%
46	36,854	-143	-0.39%	21	36,832	-28	-0.08%
52	36,841	-135	-0.37%	53	36,832	-25	-0.07%
25	36,856	-119	-0.32%	41	36,844	-25	-0.07%
60	36,851	-117	-0.32%	47	36,851	-23	-0.06%
22	36,862	-112	-0.30%	58	36,836	-22	-0.06%
10	36,870	-98	-0.27%	34	36,851	-20	-0.05%
62	36,839	-91	-0.25%	20	36,855	-20	-0.05%
48	36,842	-80	-0.22%	38	36,847	-19	-0.05%
42	36,857	-75	-0.20%	55	36,833	-17	-0.05%
32	36,839	-74	-0.20%	54	36,837	-17	-0.05%
31	36,852	-71	-0.19%	39	36,859	-17	-0.05%
41	36,844	-67	-0.18%	44	36,847	-16	-0.04%
54	36,837	-44	-0.12%	6	36,851	-15	-0.04%
20	36,855	-35	-0.09%	30	36,858	-14	-0.04%

Differential Privacy

House Districts

7	36,855	-24	-0.07%	45	36,856	-12	-0.03%
8	36,867	-19	-0.05%	56	36,852	-7	-0.02%
2	36,847	-18	-0.05%	13	36,859	-7	-0.02%
16	36,850	-13	-0.04%	74	36,874	-7	-0.02%
61	36,853	-3	-0.01%	27	36,857	-3	-0.01%
72	36,846	1	0.00%	2	36,847	-2	-0.01%
36	36,843	3	0.01%	70	36,830	1	0.00%
59	36,844	12	0.03%	61	36,853	2	0.01%
19	36,874	14	0.04%	15	36,852	5	0.01%
17	36,871	22	0.06%	23	36,855	7	0.02%
33	36,845	22	0.06%	7	36,855	11	0.03%
66	36,857	25	0.07%	68	36,830	13	0.04%
63	36,855	26	0.07%	67	36,859	14	0.04%
4	36,844	30	0.08%	37	36,841	15	0.04%
47	36,851	34	0.09%	8	36,867	17	0.05%
3	36,852	51	0.14%	28	36,864	17	0.05%
5	36,876	55	0.15%	22	36,862	17	0.05%
23	36,855	59	0.16%	3	36,852	22	0.06%
15	36,852	67	0.18%	35	36,860	23	0.06%
38	36,847	70	0.19%	19	36,874	24	0.07%
18	36,852	71	0.19%	72	36,846	27	0.07%
65	36,848	83	0.23%	9	36,845	27	0.07%
1	36,851	99	0.27%	12	36,876	29	0.08%
27	36,857	125	0.34%	49	36,856	30	0.08%
69	36,830	126	0.34%	46	36,854	35	0.09%
75	36,860	127	0.34%	73	36,836	37	0.10%
70	36,830	128	0.35%	14	36,873	40	0.11%
57	36,854	137	0.37%	57	36,854	41	0.11%
58	36,836	152	0.41%	63	36,855	47	0.13%
55	36,833	177	0.48%	69	36,830	48	0.13%
39	36,859	182	0.49%	1	36,851	49	0.13%
28	36,864	207	0.56%	50	36,844	49	0.13%
71	36,859	215	0.58%	66	36,857	52	0.14%
24	36,852	227	0.62%	42	36,857	54	0.15%
12	36,876	236	0.64%	4	36,844	55	0.15%
9	36,845	239	0.65%	60	36,851	60	0.16%
49	36,856	247	0.67%	33	36,845	70	0.19%
53	36,832	260	0.71%	32	36,839	71	0.19%
50	36,844	265	0.72%	17	36,871	78	0.21%
37	36,841	360	0.98%	59	36,844	84	0.23%
26	36,850	436	1.18%	26	36,850	92	0.25%
73	36,836	463	1.26%	11	36,871	113	0.31%
68	36,830	835	2.27%	62	36,839	122	0.33%

Differential Privacy

House Districts

Differential Privacy Applied to 2010 House District Populations

Key to Colors

- Less than -1.00%
- -1.00% to -0.40%
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- 0% to 0.40%
- 0.40% to 1.00%
- Greater than 1.00%

October 2019 Version				November 2020 Version			
District	2010 Redistricting Population	Number	Percent	District	2010 Redistricting Population	Number	Percent
1	36,851	99	0.27%	1	36,851	49	0.13%
2	36,847	-18	-0.05%	2	36,847	-2	-0.01%
3	36,852	51	0.14%	3	36,852	22	0.06%
4	36,844	30	0.08%	4	36,844	55	0.15%
5	36,876	55	0.15%	5	36,876	-79	-0.21%
6	36,851	-264	-0.72%	6	36,851	-15	-0.04%
7	36,855	-24	-0.07%	7	36,855	11	0.03%
8	36,867	-19	-0.05%	8	36,867	17	0.05%
9	36,845	239	0.65%	9	36,845	27	0.07%
10	36,870	-98	-0.27%	10	36,870	-33	-0.09%
11	36,871	-462	-1.25%	11	36,871	113	0.31%
12	36,876	236	0.64%	12	36,876	29	0.08%
13	36,859	-193	-0.52%	13	36,859	-7	-0.02%
14	36,873	-166	-0.45%	14	36,873	40	0.11%
15	36,852	67	0.18%	15	36,852	5	0.01%
16	36,850	-13	-0.04%	16	36,850	-155	-0.42%
17	36,871	22	0.06%	17	36,871	78	0.21%
18	36,852	71	0.19%	18	36,852	-83	-0.23%
19	36,874	14	0.04%	19	36,874	24	0.07%
20	36,855	-35	-0.09%	20	36,855	-20	-0.05%
21	36,832	-372	-1.01%	21	36,832	-28	-0.08%
22	36,862	-112	-0.30%	22	36,862	17	0.05%
23	36,855	59	0.16%	23	36,855	7	0.02%
24	36,852	227	0.62%	24	36,852	-48	-0.13%
25	36,856	-119	-0.32%	25	36,856	-40	-0.11%
26	36,850	436	1.18%	26	36,850	92	0.25%
27	36,857	125	0.34%	27	36,857	-3	-0.01%
28	36,864	207	0.56%	28	36,864	17	0.05%
29	36,853	-394	-1.07%	29	36,853	-100	-0.27%
30	36,858	-235	-0.64%	30	36,858	-14	-0.04%
31	36,852	-71	-0.19%	31	36,852	-29	-0.08%
32	36,839	-74	-0.20%	32	36,839	71	0.19%

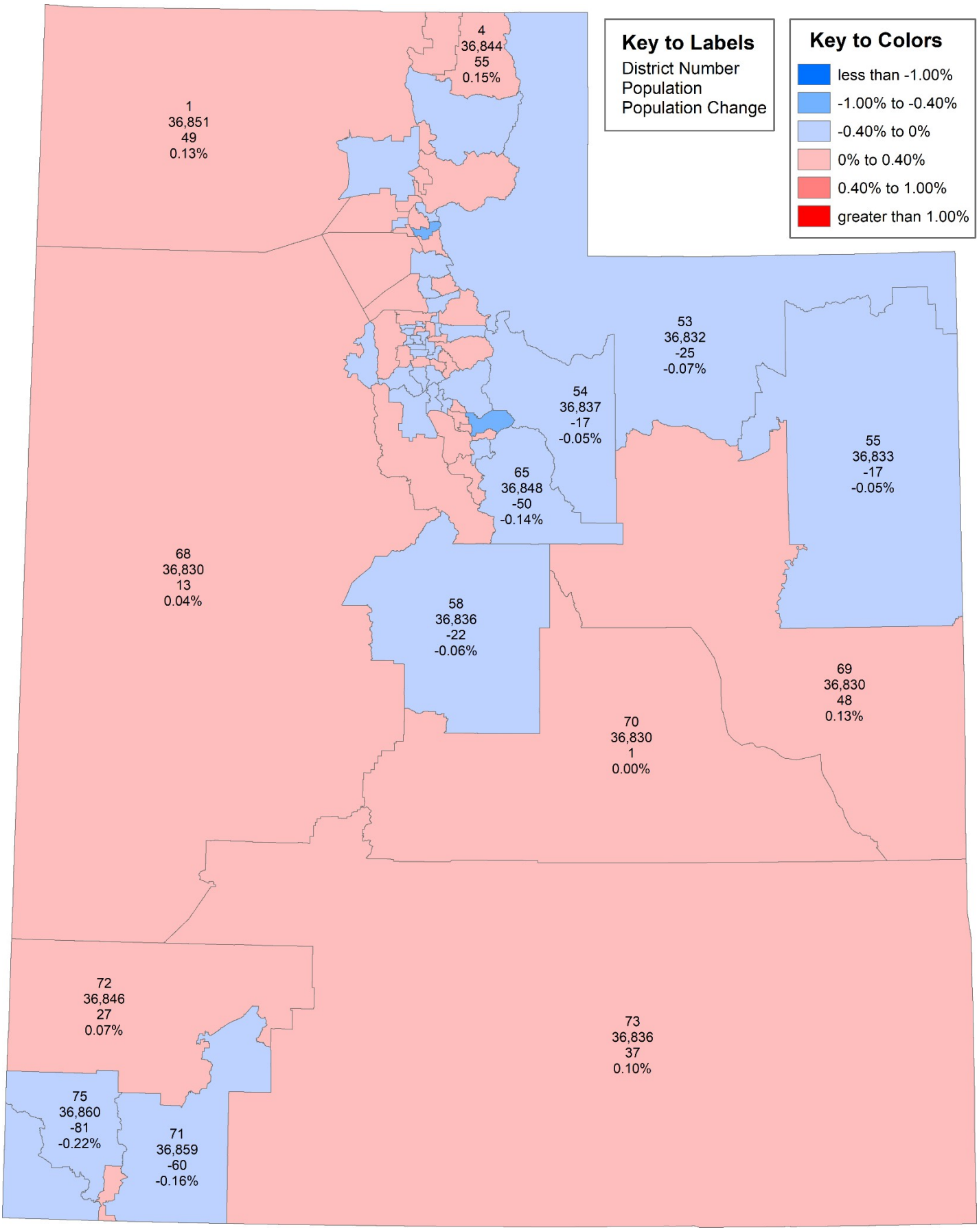
Differential Privacy

House Districts

33	36,845	22	0.06%	33	36,845	70	0.19%
34	36,851	-159	-0.43%	34	36,851	-20	-0.05%
35	36,860	-155	-0.42%	35	36,860	23	0.06%
36	36,843	3	0.01%	36	36,843	-29	-0.08%
37	36,841	360	0.98%	37	36,841	15	0.04%
38	36,847	70	0.19%	38	36,847	-19	-0.05%
39	36,859	182	0.49%	39	36,859	-17	-0.05%
40	36,855	-265	-0.72%	40	36,855	-40	-0.11%
41	36,844	-67	-0.18%	41	36,844	-25	-0.07%
42	36,857	-75	-0.20%	42	36,857	54	0.15%
43	36,857	-386	-1.05%	43	36,857	-70	-0.19%
44	36,847	-184	-0.50%	44	36,847	-16	-0.04%
45	36,856	-146	-0.40%	45	36,856	-12	-0.03%
46	36,854	-143	-0.39%	46	36,854	35	0.09%
47	36,851	34	0.09%	47	36,851	-23	-0.06%
48	36,842	-80	-0.22%	48	36,842	-150	-0.41%
49	36,856	247	0.67%	49	36,856	30	0.08%
50	36,844	265	0.72%	50	36,844	49	0.13%
51	36,853	-143	-0.39%	51	36,853	-42	-0.11%
52	36,841	-135	-0.37%	52	36,841	-43	-0.12%
53	36,832	260	0.71%	53	36,832	-25	-0.07%
54	36,837	-44	-0.12%	54	36,837	-17	-0.05%
55	36,833	177	0.48%	55	36,833	-17	-0.05%
56	36,852	-254	-0.69%	56	36,852	-7	-0.02%
57	36,854	137	0.37%	57	36,854	41	0.11%
58	36,836	152	0.41%	58	36,836	-22	-0.06%
59	36,844	12	0.03%	59	36,844	84	0.23%
60	36,851	-117	-0.32%	60	36,851	60	0.16%
61	36,853	-3	-0.01%	61	36,853	2	0.01%
62	36,839	-91	-0.25%	62	36,839	122	0.33%
63	36,855	26	0.07%	63	36,855	47	0.13%
64	36,846	-215	-0.58%	64	36,846	-50	-0.14%
65	36,848	83	0.23%	65	36,848	-50	-0.14%
66	36,857	25	0.07%	66	36,857	52	0.14%
67	36,859	-175	-0.47%	67	36,859	14	0.04%
68	36,830	835	2.27%	68	36,830	13	0.04%
69	36,830	126	0.34%	69	36,830	48	0.13%
70	36,830	128	0.35%	70	36,830	1	0.00%
71	36,859	215	0.58%	71	36,859	-60	-0.16%
72	36,846	1	0.00%	72	36,846	27	0.07%
73	36,836	463	1.26%	73	36,836	37	0.10%
74	36,874	-382	-1.04%	74	36,874	-7	-0.02%
75	36,860	127	0.34%	75	36,860	-81	-0.22%

Differential Privacy

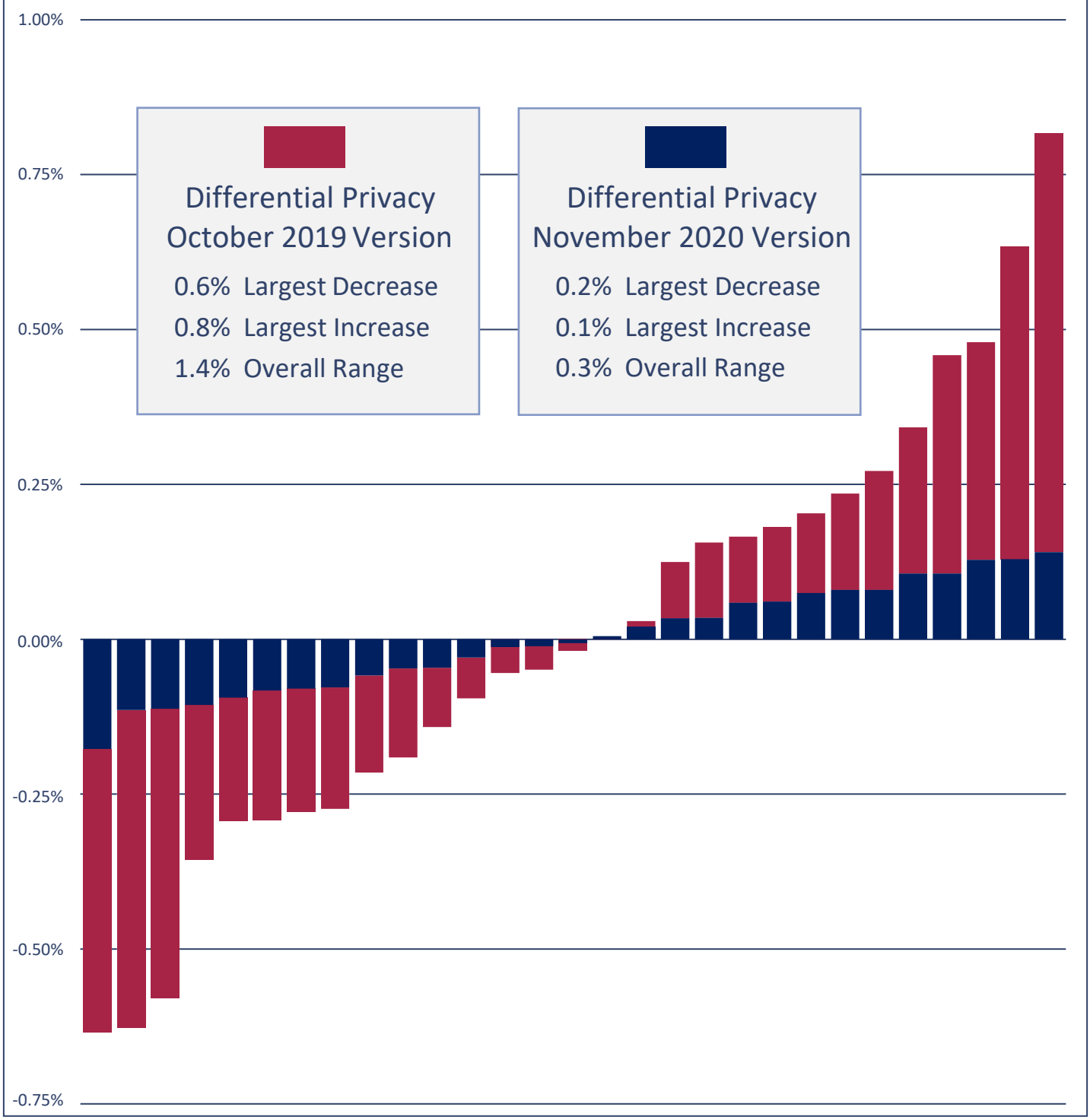
House Districts



Differential Privacy

Senate Districts

Differential Privacy Applied to 2010 Senate District Populations



Differential Privacy

Senate Districts

Differential Privacy Applied to 2010 Senate District Populations

Key to Colors

- Less than -0.40%
- -.040% to -0.20%
- -0.20% to 0%
- 0% to 0.20%
- 0.20% to 0.50%
- greater than 0.50%

October 2019 Version				November 2020 Version			
District	2010 Redistricting Population	Number	Percent	District	2010 Redistricting Population	Number	Percent
12	95,304	-605	-0.63%	19	95,309	-169	-0.18%
3	95,304	-597	-0.63%	11	95,306	-109	-0.11%
22	95,305	-552	-0.58%	18	95,307	-107	-0.11%
11	95,306	-339	-0.36%	4	95,308	-101	-0.11%
16	95,306	-280	-0.29%	25	95,305	-90	-0.09%
5	95,307	-278	-0.29%	27	95,307	-79	-0.08%
15	95,306	-266	-0.28%	16	95,306	-76	-0.08%
29	95,309	-261	-0.27%	14	95,309	-74	-0.08%
18	95,307	-205	-0.22%	9	95,306	-56	-0.06%
21	95,306	-182	-0.19%	23	95,307	-45	-0.05%
13	95,305	-135	-0.14%	12	95,304	-44	-0.05%
6	95,306	-91	-0.10%	6	95,306	-28	-0.03%
19	95,309	-52	-0.05%	7	95,306	-12	-0.01%
14	95,309	-47	-0.05%	28	95,303	-11	-0.01%
7	95,306	-18	-0.02%	5	95,307	-6	-0.01%
8	95,309	1	0.00%	29	95,309	5	0.01%
4	95,308	28	0.03%	3	95,304	19	0.02%
1	95,304	119	0.12%	2	95,308	32	0.03%
9	95,306	149	0.16%	20	95,304	33	0.03%
23	95,307	158	0.17%	1	95,304	56	0.06%
20	95,304	173	0.18%	13	95,305	58	0.06%
17	95,307	194	0.20%	21	95,306	71	0.07%
28	95,303	224	0.24%	17	95,307	76	0.08%
25	95,305	259	0.27%	24	95,307	76	0.08%
26	95,307	326	0.34%	8	95,309	101	0.11%
27	95,307	437	0.46%	22	95,305	101	0.11%
10	95,308	457	0.48%	26	95,307	122	0.13%
2	95,308	605	0.63%	10	95,308	123	0.13%
24	95,307	778	0.82%	15	95,306	134	0.14%

Differential Privacy

Senate Districts

Differential Privacy Applied to 2010 Senate District Populations

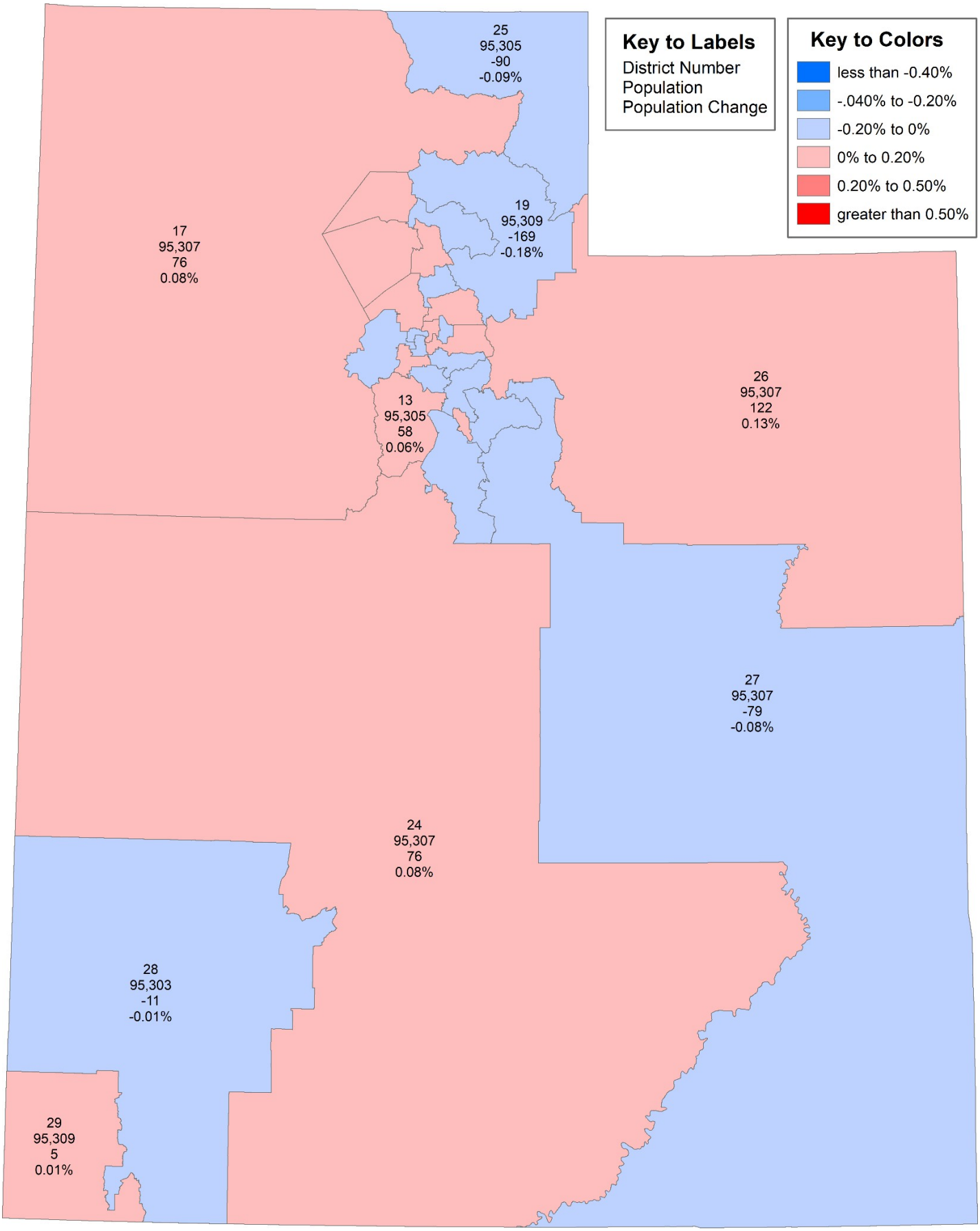
Key to Colors

- Less than -0.40%
- -.040% to -0.20%
- -0.20% to 0%
- 0% to 0.20%
- 0.20% to 0.50%
- greater than 0.50%

October 2019 Version				November 2020 Version			
District	2010 Redistricting Population	Number	Percent	District	2010 Redistricting Population	Number	Percent
1	95,304	119	0.12%	1	95,304	56	0.06%
2	95,308	605	0.63%	2	95,308	32	0.03%
3	95,304	-597	-0.63%	3	95,304	19	0.02%
4	95,308	28	0.03%	4	95,308	-101	-0.11%
5	95,307	-278	-0.29%	5	95,307	-6	-0.01%
6	95,306	-91	-0.10%	6	95,306	-28	-0.03%
7	95,306	-18	-0.02%	7	95,306	-12	-0.01%
8	95,309	1	0.00%	8	95,309	101	0.11%
9	95,306	149	0.16%	9	95,306	-56	-0.06%
10	95,308	457	0.48%	10	95,308	123	0.13%
11	95,306	-339	-0.36%	11	95,306	-109	-0.11%
12	95,304	-605	-0.63%	12	95,304	-44	-0.05%
13	95,305	-135	-0.14%	13	95,305	58	0.06%
14	95,309	-47	-0.05%	14	95,309	-74	-0.08%
15	95,306	-266	-0.28%	15	95,306	134	0.14%
16	95,306	-280	-0.29%	16	95,306	-76	-0.08%
17	95,307	194	0.20%	17	95,307	76	0.08%
18	95,307	-205	-0.22%	18	95,307	-107	-0.11%
19	95,309	-52	-0.05%	19	95,309	-169	-0.18%
20	95,304	173	0.18%	20	95,304	33	0.03%
21	95,306	-182	-0.19%	21	95,306	71	0.07%
22	95,305	-552	-0.58%	22	95,305	101	0.11%
23	95,307	158	0.17%	23	95,307	-45	-0.05%
24	95,307	778	0.82%	24	95,307	76	0.08%
25	95,305	259	0.27%	25	95,305	-90	-0.09%
26	95,307	326	0.34%	26	95,307	122	0.13%
27	95,307	437	0.46%	27	95,307	-79	-0.08%
28	95,303	224	0.24%	28	95,303	-11	-0.01%
29	95,309	-261	-0.27%	29	95,309	5	0.01%

Differential Privacy

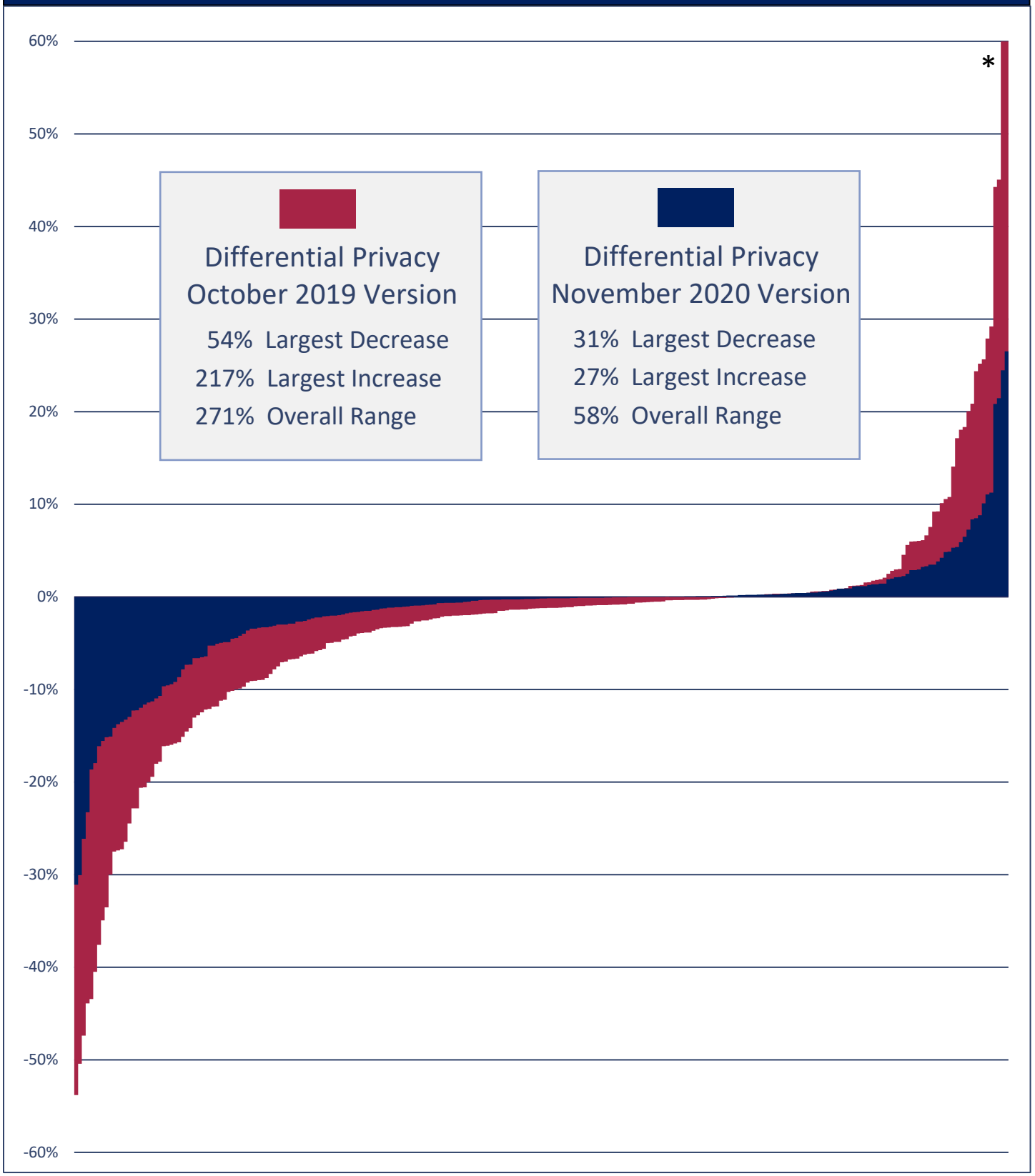
Senate Districts



Differential Privacy

Municipalities

Differential Privacy: Versions Compared



* Outliers not shown. Largest increases were 217% and 121%. See page 18.

Differential Privacy

Municipalities

Differential Privacy Applied to 2010 Municipal Populations

Key to Colors

- less than -10%
- -10% to -3%
- -3% to 0%
- 0% to 3%
- 3% to 10%
- greater than 10%

October 2019 Version

Municipality	2010 Census Population	Number	Percent
Tabiona	171	-92	-53.80%
Alton	119	-60	-50.42%
Kingston	173	-82	-47.40%
Henrieville	230	-101	-43.91%
Bryce Canyon City	198	-86	-43.43%
Clawson	163	-66	-40.49%
Hatch	133	-50	-37.59%
Brian Head	83	-29	-34.94%
Snowville	167	-56	-33.53%
Manila	310	-93	-30.00%
Sigurd	429	-118	-27.51%
Hanksville	219	-60	-27.40%
Fayette	242	-66	-27.27%
Meadow	310	-82	-26.45%
Bicknell	327	-80	-24.46%
Rockville	245	-56	-22.86%
Oak City	578	-132	-22.84%
Goshen	921	-190	-20.63%
Rush Valley	447	-92	-20.58%
Altamont	225	-45	-20.00%
Spring City	988	-192	-19.43%
Amalga	488	-88	-18.03%
Redmond	730	-130	-17.81%
Laketown	248	-40	-16.13%
Loa	572	-92	-16.08%
Francis	1,077	-172	-15.97%
Bear River City	853	-135	-15.83%
Hideout	656	-103	-15.70%
Joseph	344	-52	-15.12%
Kanosh	474	-69	-14.56%
Springdale	529	-75	-14.18%

November 2020 Version

Municipality	2010 Census Population	Number	Percent
Alton	119	-37	-31.09%
Clawson	163	-49	-30.06%
Manila	310	-81	-26.13%
Rockville	245	-57	-23.27%
Bicknell	327	-61	-18.65%
Cannonville	167	-30	-17.96%
Mayfield	496	-80	-16.13%
Woodruff	180	-28	-15.56%
Meadow	310	-47	-15.16%
Randolph	464	-70	-15.09%
Levan	841	-119	-14.15%
Koosharem	327	-45	-13.76%
Garden City	562	-76	-13.52%
Leamington	226	-30	-13.27%
Rush Valley	447	-58	-12.98%
Tabiona	171	-21	-12.28%
Portage	245	-30	-12.24%
Snowville	167	-20	-11.98%
Redmond	730	-85	-11.64%
Sigurd	429	-49	-11.42%
Hatch	133	-15	-11.28%
Castle Valley	319	-35	-10.97%
Scipio	327	-35	-10.70%
New Harmony	207	-20	-9.66%
Elmo	418	-40	-9.57%
Goshen	921	-87	-9.45%
Hinckley	696	-64	-9.20%
Glendale	381	-33	-8.66%
Henrieville	230	-18	-7.83%
Howell	245	-18	-7.35%
Independence	164	-12	-7.32%

Differential Privacy

Municipalities

New Harmony	207	-27	-13.04%	Fountain Green	1,071	-71	-6.63%
Enterprise	1,711	-219	-12.80%	Deweyville	332	-22	-6.63%
Levan	841	-105	-12.49%	Alta	383	-25	-6.53%
Escalante	797	-97	-12.17%	Springdale	529	-34	-6.43%
Fairview	1,247	-151	-12.11%	Bear River City	853	-45	-5.28%
Cleveland	464	-55	-11.85%	Ophir	38	-2	-5.26%
Sterling	262	-31	-11.83%	Charleston	415	-21	-5.06%
Randolph	464	-52	-11.21%	Mona	1,547	-77	-4.98%
Vernon	243	-27	-11.11%	Marysvale	408	-20	-4.90%
Orangeville	1,470	-151	-10.27%	Altamont	225	-11	-4.89%
Plymouth	414	-42	-10.14%	Cleveland	464	-21	-4.53%
Tropic	530	-53	-10.00%	Henefer	766	-34	-4.44%
Virgin	596	-59	-9.90%	Fairfield	119	-5	-4.20%
Castle Valley	319	-31	-9.72%	Boulder	226	-9	-3.98%
Holden	378	-35	-9.26%	Oak City	578	-21	-3.63%
Midway	3,845	-350	-9.10%	Fairview	1,247	-43	-3.45%
East Carbon	1,301	-118	-9.07%	Holden	378	-13	-3.44%
Woodland Hills	1,344	-121	-9.00%	Wellington	1,676	-56	-3.34%
Ferron	1,626	-146	-8.98%	Newton	789	-26	-3.30%
Circleville	547	-48	-8.78%	Circleville	547	-18	-3.29%
Cornish	288	-24	-8.33%	Tropic	530	-17	-3.21%
Alta	383	-30	-7.83%	Huntsville	608	-19	-3.13%
Mona	1,547	-116	-7.50%	Orangeville	1,470	-44	-2.99%
Clarkston	666	-47	-7.06%	Toquerville	1,370	-41	-2.99%
Fountain Green	1,071	-75	-7.00%	Kamas	1,811	-54	-2.98%
Elk Ridge	2,436	-165	-6.77%	Millville	1,829	-53	-2.90%
Newton	789	-53	-6.72%	Midway	3,845	-111	-2.89%
Myton	569	-38	-6.68%	Paragonah	488	-13	-2.66%
Orderville	577	-37	-6.41%	Lewiston	1,766	-47	-2.66%
Mayfield	496	-31	-6.25%	River Heights	1,734	-45	-2.60%
Fielding	455	-28	-6.15%	Aurora	1,016	-25	-2.46%
Howell	245	-15	-6.12%	Leeds	820	-19	-2.32%
Manti	3,276	-192	-5.86%	East Carbon	1,301	-29	-2.23%
Moroni	1,423	-82	-5.76%	Monroe	2,256	-50	-2.22%
Hinckley	696	-39	-5.60%	Eureka	669	-14	-2.09%
Ballard	801	-40	-4.99%	Castle Dale	1,630	-34	-2.09%
Toquerville	1,370	-68	-4.96%	Panguitch	1,520	-31	-2.04%
Independence	164	-8	-4.88%	Bryce Canyon City	198	-4	-2.02%
Mount Pleasant	3,260	-159	-4.88%	Moroni	1,423	-28	-1.97%
Green River	952	-44	-4.62%	Coalville	1,363	-26	-1.91%
Kanab	4,312	-197	-4.57%	Stockton	616	-11	-1.79%
Nibley	5,438	-232	-4.27%	Gunnison	3,285	-56	-1.70%
Monticello	1,972	-83	-4.21%	Naples	1,755	-29	-1.65%
Lewiston	1,766	-70	-3.96%	Monticello	1,972	-32	-1.62%

Differential Privacy

Municipalities

Gunnison	3,285	-128	-3.90%	Apple Valley	701	-11	-1.57%
Farr West	5,928	-229	-3.86%	Uintah	1,322	-20	-1.51%
Fillmore	2,435	-94	-3.86%	Virgin	596	-9	-1.51%
Willard	1,772	-65	-3.67%	Milford	1,409	-20	-1.42%
Garland	2,400	-84	-3.50%	Mount Pleasant	3,260	-45	-1.38%
Coalville	1,363	-46	-3.37%	Annabella	795	-10	-1.26%
Honeyville	1,441	-48	-3.33%	Duchesne	1,690	-21	-1.24%
Naples	1,755	-58	-3.30%	Perry	4,512	-53	-1.17%
Smithfield	9,495	-310	-3.26%	Corinne	685	-8	-1.17%
Kamas	1,811	-59	-3.26%	Fillmore	2,435	-27	-1.11%
Glenwood	464	-15	-3.23%	Elk Ridge	2,436	-27	-1.11%
Elsinore	847	-27	-3.19%	Daniel	938	-10	-1.07%
Moab	5,046	-160	-3.17%	Morgan	3,687	-38	-1.03%
Plain City	5,476	-159	-2.90%	Manti	3,276	-32	-0.98%
Minersville	907	-24	-2.65%	Kanab	4,312	-41	-0.95%
Payson	18,294	-484	-2.65%	Richmond	2,470	-23	-0.93%
Morgan	3,687	-94	-2.55%	Garland	2,400	-22	-0.92%
Eureka	669	-17	-2.54%	Wendover	1,400	-12	-0.86%
Aurora	1,016	-25	-2.46%	Woods Cross	9,761	-82	-0.84%
Ephraim	6,135	-143	-2.33%	Antimony	122	-1	-0.82%
Cedar City	28,857	-667	-2.31%	Paradise	904	-6	-0.66%
Beaver	3,112	-67	-2.15%	Richfield	7,551	-50	-0.66%
Henefer	766	-16	-2.09%	Blanding	3,375	-22	-0.65%
Wellington	1,676	-35	-2.09%	Enterprise	1,711	-11	-0.64%
Portage	245	-5	-2.04%	Pleasant View	7,979	-51	-0.64%
Castle Dale	1,630	-33	-2.02%	Kanosh	474	-3	-0.63%
Price	8,715	-175	-2.01%	Sunset	5,122	-32	-0.62%
Centerfield	1,367	-27	-1.98%	Torrey	182	-1	-0.55%
Ivins	6,753	-133	-1.97%	Woodland Hills	1,344	-7	-0.52%
Huntington	2,129	-41	-1.93%	Mapleton	7,979	-34	-0.43%
Oakley	1,470	-28	-1.90%	Vernon	243	-1	-0.41%
Paragonah	488	-9	-1.84%	Midvale	27,964	-101	-0.36%
Deweyville	332	-6	-1.81%	Grantsville	8,893	-29	-0.33%
Garden City	562	-10	-1.78%	Clearfield	30,112	-95	-0.32%
Duchesne	1,690	-30	-1.78%	Tremonton	7,647	-23	-0.30%
Salina	2,489	-44	-1.77%	Ephraim	6,135	-18	-0.29%
Pleasant View	7,979	-120	-1.50%	Enoch	5,803	-17	-0.29%
Santa Clara	6,003	-90	-1.50%	Providence	7,075	-20	-0.28%
Alpine	9,555	-140	-1.47%	Centerville	15,335	-43	-0.28%
Spanish Fork	34,691	-482	-1.39%	Francis	1,077	-3	-0.28%
Roosevelt	6,046	-84	-1.39%	Heber	11,362	-30	-0.26%
Cedar Hills	9,796	-135	-1.38%	Riverton	38,753	-102	-0.26%
Monroe	2,256	-31	-1.37%	Highland	15,523	-39	-0.25%
South Ogden	16,532	-225	-1.36%	Willard	1,772	-4	-0.23%

Differential Privacy

Municipalities

North Logan	8,269	-107	-1.29%	Smithfield	9,495	-21	-0.22%
Tremonton	7,647	-97	-1.27%	Parowan	2,790	-6	-0.22%
Clearfield	30,112	-375	-1.25%	Cedar City	28,857	-56	-0.19%
Saratoga Springs	17,781	-218	-1.23%	North Ogden	17,357	-31	-0.18%
Marysvale	408	-5	-1.23%	Nibley	5,438	-9	-0.17%
Enoch	5,803	-69	-1.19%	Harrisville	5,567	-9	-0.16%
Heber	11,362	-134	-1.18%	Moab	5,046	-8	-0.16%
Woods Cross	9,761	-115	-1.18%	Eagle Mountain	21,415	-33	-0.15%
Mendon	1,282	-15	-1.17%	Farmington	18,275	-28	-0.15%
Brigham City	17,899	-206	-1.15%	Lehi	47,407	-72	-0.15%
Kanarraville	355	-4	-1.13%	Cedar Hills	9,796	-14	-0.14%
Park City	7,558	-85	-1.12%	Kaysville	27,300	-35	-0.13%
Perry	4,512	-46	-1.02%	Washington Terrace	9,067	-11	-0.12%
Roy	36,884	-370	-1.00%	Minersville	907	-1	-0.11%
Apple Valley	701	-7	-1.00%	Syracuse	24,331	-25	-0.10%
South Salt Lake	23,617	-224	-0.95%	Springville	29,466	-29	-0.10%
Lehi	47,407	-448	-0.95%	Hooper	7,218	-7	-0.10%
Wendover	1,400	-13	-0.93%	South Salt Lake	23,617	-22	-0.09%
Providence	7,075	-64	-0.90%	Clinton	20,426	-19	-0.09%
Hyrum	7,609	-68	-0.89%	Hyrum	7,609	-7	-0.09%
Sandy	87,461	-776	-0.89%	St. George	72,897	-65	-0.09%
Syracuse	24,331	-213	-0.88%	Tooele	31,605	-24	-0.08%
Midvale	27,964	-239	-0.85%	Draper	42,274	-27	-0.06%
La Verkin	4,060	-34	-0.84%	South Jordan	50,418	-32	-0.06%
Farmington	18,275	-151	-0.83%	Huntington	2,129	-1	-0.05%
American Fork	26,263	-213	-0.81%	North Salt Lake	16,322	-7	-0.04%
Kaysville	27,300	-205	-0.75%	Lindon	10,070	-3	-0.03%
Richfield	7,551	-56	-0.74%	West Jordan	103,712	-25	-0.02%
Leeds	820	-5	-0.61%	Orem	88,328	-21	-0.02%
Riverton	38,753	-236	-0.61%	Taylorsville	58,652	-12	-0.02%
Hildale	2,726	-16	-0.59%	Salem	6,423	-1	-0.02%
Richmond	2,470	-14	-0.57%	West Valley City	129,480	-20	-0.02%
Tooele	31,605	-174	-0.55%	Ivins	6,753	-1	-0.01%
North Salt Lake	16,322	-86	-0.53%	Ogden	82,825	-11	-0.01%
Riverdale	8,426	-43	-0.51%	American Fork	26,263	-1	0.00%
Clinton	20,426	-100	-0.49%	Layton	67,311	-1	0.00%
Draper	42,274	-161	-0.38%	Lyman	258	0	0.00%
Provo	112,488	-417	-0.37%	Provo	112,488	2	0.00%
West Haven	10,272	-37	-0.36%	Spanish Fork	34,691	3	0.01%
Harrisville	5,567	-20	-0.36%	Price	8,715	1	0.01%
Washington Terrace	9,067	-31	-0.34%	Salt Lake City	186,440	29	0.02%
Hurricane	13,748	-46	-0.33%	Farr West	5,928	2	0.03%
Cottonwood Heights	33,433	-107	-0.32%	Bountiful	42,552	15	0.04%
Orem	88,328	-279	-0.32%	Pleasant Grove	33,509	15	0.04%

Differential Privacy

Municipalities

West Valley City	129,480	-408	-0.32%	Roy	36,884	25	0.07%
Pleasant Grove	33,509	-104	-0.31%	Murray	46,746	33	0.07%
West Jordan	103,712	-313	-0.30%	Payson	18,294	13	0.07%
Logan	48,174	-117	-0.24%	Holladay	26,472	20	0.08%
Eagle Mountain	21,415	-44	-0.21%	Logan	48,174	43	0.09%
Parowan	2,790	-4	-0.14%	Fruit Heights	4,987	5	0.10%
Lindon	10,070	-14	-0.14%	Alpine	9,555	10	0.10%
St. George	72,897	-88	-0.12%	Cottonwood Heights	33,433	36	0.11%
Blanding	3,375	-3	-0.09%	Saratoga Springs	17,781	24	0.13%
Ogden	82,825	-62	-0.07%	Washington	18,761	27	0.14%
South Jordan	50,418	-16	-0.03%	Santa Clara	6,003	9	0.15%
Paradise	904	0	0.00%	Brigham City	17,899	34	0.19%
Bluffdale	7,598	7	0.09%	Vernal	9,089	18	0.20%
Springville	29,466	28	0.10%	Genola	1,370	3	0.22%
Taylorsville	58,652	59	0.10%	Hildale	2,726	6	0.22%
Layton	67,311	70	0.10%	Riverdale	8,426	19	0.23%
Holladay	26,472	40	0.15%	Roosevelt	6,046	14	0.23%
Hyde Park	3,833	8	0.21%	West Haven	10,272	24	0.23%
North Ogden	17,357	49	0.28%	Plain City	5,476	13	0.24%
Bountiful	42,552	126	0.30%	Delta	3,436	9	0.26%
Herriman	21,785	74	0.34%	Bluffdale	7,598	20	0.26%
Washington	18,761	64	0.34%	South Ogden	16,532	44	0.27%
Wellsville	3,432	12	0.35%	Hurricane	13,748	45	0.33%
Santaquin	9,128	32	0.35%	Sandy	87,461	297	0.34%
West Point	9,511	35	0.37%	Herriman	21,785	76	0.35%
Salt Lake City	186,440	697	0.37%	Mendon	1,282	5	0.39%
Annabella	795	3	0.38%	Nephi	5,389	22	0.41%
Big Water	475	2	0.42%	Hyde Park	3,833	16	0.42%
Centerville	15,335	65	0.42%	Green River	952	4	0.42%
South Weber	6,051	27	0.45%	North Logan	8,269	37	0.45%
Murray	46,746	262	0.56%	Hideout	656	3	0.46%
Genola	1,370	8	0.58%	West Point	9,511	44	0.46%
Vernal	9,089	54	0.59%	Park City	7,558	41	0.54%
Milford	1,409	9	0.64%	Salina	2,489	14	0.56%
Sunset	5,122	33	0.64%	La Verkin	4,060	24	0.59%
Nephi	5,389	41	0.76%	Santaquin	9,128	61	0.67%
Panguitch	1,520	12	0.79%	Helper	2,201	16	0.73%
Huntsville	608	5	0.82%	Mantua	687	6	0.87%
Leamington	226	2	0.88%	Loa	572	5	0.87%
Highland	15,523	144	0.93%	Honeyville	1,441	13	0.90%
West Bountiful	5,265	62	1.18%	West Bountiful	5,265	48	0.91%
Grantsville	8,893	108	1.21%	South Weber	6,051	69	1.14%
Salem	6,423	79	1.23%	Kingston	173	2	1.16%
Helper	2,201	28	1.27%	Elwood	1,034	12	1.16%

Differential Privacy

Municipalities

River Heights	1,734	27	1.56%	Joseph	344	4	1.16%
Delta	3,436	54	1.57%	Oakley	1,470	19	1.29%
Hooper	7,218	127	1.76%	Beaver	3,112	42	1.35%
Mapleton	7,979	146	1.83%	Clarkston	666	9	1.35%
Mantua	687	13	1.89%	Spring City	988	14	1.42%
Millville	1,829	38	2.08%	Amalga	488	7	1.43%
Corinne	685	17	2.48%	Wellsville	3,432	65	1.89%
Elwood	1,034	29	2.80%	Centerfield	1,367	27	1.98%
Fruit Heights	4,987	148	2.97%	Elsinore	847	18	2.13%
Marriott-Slaterville	1,701	51	3.00%	Trenton	464	10	2.16%
Uintah	1,322	60	4.54%	Marriott-Slaterville	1,701	38	2.23%
Rocky Ridge	733	41	5.59%	Ballard	801	20	2.50%
Elmo	418	25	5.98%	Escalante	797	23	2.89%
Cannonville	167	10	5.99%	Fayette	242	7	2.89%
Glendale	381	23	6.04%	Ferron	1,626	48	2.95%
Woodruff	180	11	6.11%	Central Valley	528	17	3.22%
Sunnyside	377	25	6.63%	Fielding	455	15	3.30%
Lynndyl	106	8	7.55%	Cornish	288	10	3.47%
Wallsburg	250	23	9.20%	Emery	288	10	3.47%
Cedar Fort	368	34	9.24%	Rocky Ridge	733	28	3.82%
Charleston	415	42	10.12%	Kanarraville	355	15	4.23%
Daniel	938	99	10.55%	Plymouth	414	20	4.83%
Central Valley	528	57	10.80%	Cedar Fort	368	18	4.89%
Koosharem	327	46	14.07%	Sunnyside	377	20	5.31%
Scipio	327	56	17.13%	Glenwood	464	25	5.39%
Emery	288	52	18.06%	Orderville	577	34	5.89%
Stockton	616	113	18.34%	Myton	569	37	6.50%
Trenton	464	93	20.04%	Laketown	248	18	7.26%
Wales	302	63	20.86%	Junction	191	16	8.38%
Fairfield	119	29	24.37%	Lynndyl	106	9	8.49%
Vineyard	139	35	25.18%	Wallsburg	250	22	8.80%
Junction	191	49	25.65%	Big Water	475	48	10.11%
Lyman	258	72	27.91%	Sterling	262	29	11.07%
Boulder	226	66	29.20%	Wales	302	34	11.26%
Antimony	122	54	44.26%	Scofield	24	5	20.83%
Torrey	182	82	45.05%	Hanksville	219	47	21.46%
Ophir	38	46	121.05%	Vineyard	139	34	24.46%
Scofield	24	52	216.67%	Brian Head	83	22	26.51%

Differential Privacy Applied to 2010 City/Town Populations

Key to Colors

- less than -10%
- -10% to -3%
- -3% to 0%
- 0% to 3%
- 3% to 10%
- greater than 10%

October 2019 Version				November 2020 Version			
City/Town	2010 Census Population	Number	Percent	City/Town	2010 Census Population	Number	Percent
Alpine	9,555	-140	-1.47%	Alpine	9,555	10	0.10%
Alta	383	-30	-7.83%	Alta	383	-25	-6.53%
Altamont	225	-45	-20.00%	Altamont	225	-11	-4.89%
Alton	119	-60	-50.42%	Alton	119	-37	-31.09%
Amalga	488	-88	-18.03%	Amalga	488	7	1.43%
American Fork	26,263	-213	-0.81%	American Fork	26,263	-1	0.00%
Annabella	795	3	0.38%	Annabella	795	-10	-1.26%
Antimony	122	54	44.26%	Antimony	122	-1	-0.82%
Apple Valley	701	-7	-1.00%	Apple Valley	701	-11	-1.57%
Aurora	1,016	-25	-2.46%	Aurora	1,016	-25	-2.46%
Ballard	801	-40	-4.99%	Ballard	801	20	2.50%
Bear River City	853	-135	-15.83%	Bear River City	853	-45	-5.28%
Beaver	3,112	-67	-2.15%	Beaver	3,112	42	1.35%
Bicknell	327	-80	-24.46%	Bicknell	327	-61	-18.65%
Big Water	475	2	0.42%	Big Water	475	48	10.11%
Blanding	3,375	-3	-0.09%	Blanding	3,375	-22	-0.65%
Bluffdale	7,598	7	0.09%	Bluffdale	7,598	20	0.26%
Boulder	226	66	29.20%	Boulder	226	-9	-3.98%
Bountiful	42,552	126	0.30%	Bountiful	42,552	15	0.04%
Brian Head	83	-29	-34.94%	Brian Head	83	22	26.51%
Brigham City	17,899	-206	-1.15%	Brigham City	17,899	34	0.19%
Bryce Canyon City	198	-86	-43.43%	Bryce Canyon City	198	-4	-2.02%
Cannonville	167	10	5.99%	Cannonville	167	-30	-17.96%
Castle Dale	1,630	-33	-2.02%	Castle Dale	1,630	-34	-2.09%
Castle Valley	319	-31	-9.72%	Castle Valley	319	-35	-10.97%
Cedar City	28,857	-667	-2.31%	Cedar City	28,857	-56	-0.19%
Cedar Fort	368	34	9.24%	Cedar Fort	368	18	4.89%
Cedar Hills	9,796	-135	-1.38%	Cedar Hills	9,796	-14	-0.14%
Centerfield	1,367	-27	-1.98%	Centerfield	1,367	27	1.98%

Differential Privacy

Municipalities

Centerville	15,335	65	0.42%	Centerville	15,335	-43	-0.28%
Central Valley	528	57	10.80%	Central Valley	528	17	3.22%
Charleston	415	42	10.12%	Charleston	415	-21	-5.06%
Circleville	547	-48	-8.78%	Circleville	547	-18	-3.29%
Clarkston	666	-47	-7.06%	Clarkston	666	9	1.35%
Clawson	163	-66	-40.49%	Clawson	163	-49	-30.06%
Clearfield	30,112	-375	-1.25%	Clearfield	30,112	-95	-0.32%
Cleveland	464	-55	-11.85%	Cleveland	464	-21	-4.53%
Clinton	20,426	-100	-0.49%	Clinton	20,426	-19	-0.09%
Coalville	1,363	-46	-3.37%	Coalville	1,363	-26	-1.91%
Corinne	685	17	2.48%	Corinne	685	-8	-1.17%
Cornish	288	-24	-8.33%	Cornish	288	10	3.47%
Cottonwood Heights	33,433	-107	-0.32%	Cottonwood Heights	33,433	36	0.11%
Daniel	938	99	10.55%	Daniel	938	-10	-1.07%
Delta	3,436	54	1.57%	Delta	3,436	9	0.26%
Deweyville	332	-6	-1.81%	Deweyville	332	-22	-6.63%
Draper	42,274	-161	-0.38%	Draper	42,274	-27	-0.06%
Duchesne	1,690	-30	-1.78%	Duchesne	1,690	-21	-1.24%
Eagle Mountain	21,415	-44	-0.21%	Eagle Mountain	21,415	-33	-0.15%
East Carbon	1,301	-118	-9.07%	East Carbon	1,301	-29	-2.23%
Elk Ridge	2,436	-165	-6.77%	Elk Ridge	2,436	-27	-1.11%
Elmo	418	25	5.98%	Elmo	418	-40	-9.57%
Elsinore	847	-27	-3.19%	Elsinore	847	18	2.13%
Elwood	1,034	29	2.80%	Elwood	1,034	12	1.16%
Emery	288	52	18.06%	Emery	288	10	3.47%
Enoch	5,803	-69	-1.19%	Enoch	5,803	-17	-0.29%
Enterprise	1,711	-219	-12.80%	Enterprise	1,711	-11	-0.64%
Ephraim	6,135	-143	-2.33%	Ephraim	6,135	-18	-0.29%
Escalante	797	-97	-12.17%	Escalante	797	23	2.89%
Eureka	669	-17	-2.54%	Eureka	669	-14	-2.09%
Fairfield	119	29	24.37%	Fairfield	119	-5	-4.20%
Fairview	1,247	-151	-12.11%	Fairview	1,247	-43	-3.45%
Farmington	18,275	-151	-0.83%	Farmington	18,275	-28	-0.15%
Farr West	5,928	-229	-3.86%	Farr West	5,928	2	0.03%
Fayette	242	-66	-27.27%	Fayette	242	7	2.89%
Ferron	1,626	-146	-8.98%	Ferron	1,626	48	2.95%
Fielding	455	-28	-6.15%	Fielding	455	15	3.30%
Fillmore	2,435	-94	-3.86%	Fillmore	2,435	-27	-1.11%
Fountain Green	1,071	-75	-7.00%	Fountain Green	1,071	-71	-6.63%
Francis	1,077	-172	-15.97%	Francis	1,077	-3	-0.28%
Fruit Heights	4,987	148	2.97%	Fruit Heights	4,987	5	0.10%
Garden City	562	-10	-1.78%	Garden City	562	-76	-13.52%
Garland	2,400	-84	-3.50%	Garland	2,400	-22	-0.92%
Genola	1,370	8	0.58%	Genola	1,370	3	0.22%

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Municipalities

Glendale	381	23	6.04%	Glendale	381	-33	-8.66%
Glenwood	464	-15	-3.23%	Glenwood	464	25	5.39%
Goshen	921	-190	-20.63%	Goshen	921	-87	-9.45%
Grantsville	8,893	108	1.21%	Grantsville	8,893	-29	-0.33%
Green River	952	-44	-4.62%	Green River	952	4	0.42%
Gunnison	3,285	-128	-3.90%	Gunnison	3,285	-56	-1.70%
Hanksville	219	-60	-27.40%	Hanksville	219	47	21.46%
Harrisville	5,567	-20	-0.36%	Harrisville	5,567	-9	-0.16%
Hatch	133	-50	-37.59%	Hatch	133	-15	-11.28%
Heber	11,362	-134	-1.18%	Heber	11,362	-30	-0.26%
Helper	2,201	28	1.27%	Helper	2,201	16	0.73%
Henefer	766	-16	-2.09%	Henefer	766	-34	-4.44%
Henrieville	230	-101	-43.91%	Henrieville	230	-18	-7.83%
Herriman	21,785	74	0.34%	Herriman	21,785	76	0.35%
Hideout	656	-103	-15.70%	Hideout	656	3	0.46%
Highland	15,523	144	0.93%	Highland	15,523	-39	-0.25%
Hildale	2,726	-16	-0.59%	Hildale	2,726	6	0.22%
Hinckley	696	-39	-5.60%	Hinckley	696	-64	-9.20%
Holden	378	-35	-9.26%	Holden	378	-13	-3.44%
Holladay	26,472	40	0.15%	Holladay	26,472	20	0.08%
Honeyville	1,441	-48	-3.33%	Honeyville	1,441	13	0.90%
Hooper	7,218	127	1.76%	Hooper	7,218	-7	-0.10%
Howell	245	-15	-6.12%	Howell	245	-18	-7.35%
Huntington	2,129	-41	-1.93%	Huntington	2,129	-1	-0.05%
Huntsville	608	5	0.82%	Huntsville	608	-19	-3.13%
Hurricane	13,748	-46	-0.33%	Hurricane	13,748	45	0.33%
Hyde Park	3,833	8	0.21%	Hyde Park	3,833	16	0.42%
Hyrum	7,609	-68	-0.89%	Hyrum	7,609	-7	-0.09%
Independence	164	-8	-4.88%	Independence	164	-12	-7.32%
Ivins	6,753	-133	-1.97%	Ivins	6,753	-1	-0.01%
Joseph	344	-52	-15.12%	Joseph	344	4	1.16%
Junction	191	49	25.65%	Junction	191	16	8.38%
Kamas	1,811	-59	-3.26%	Kamas	1,811	-54	-2.98%
Kanab	4,312	-197	-4.57%	Kanab	4,312	-41	-0.95%
Kanarraville	355	-4	-1.13%	Kanarraville	355	15	4.23%
Kanosh	474	-69	-14.56%	Kanosh	474	-3	-0.63%
Kaysville	27,300	-205	-0.75%	Kaysville	27,300	-35	-0.13%
Kingston	173	-82	-47.40%	Kingston	173	2	1.16%
Koosharem	327	46	14.07%	Koosharem	327	-45	-13.76%
La Verkin	4,060	-34	-0.84%	La Verkin	4,060	24	0.59%
Laketown	248	-40	-16.13%	Laketown	248	18	7.26%
Layton	67,311	70	0.10%	Layton	67,311	-1	0.00%
Leamington	226	2	0.88%	Leamington	226	-30	-13.27%
Leeds	820	-5	-0.61%	Leeds	820	-19	-2.32%

Differential Privacy

Municipalities

Lehi	47,407	-448	-0.95%	Lehi	47,407	-72	-0.15%
Levan	841	-105	-12.49%	Levan	841	-119	-14.15%
Lewiston	1,766	-70	-3.96%	Lewiston	1,766	-47	-2.66%
Lindon	10,070	-14	-0.14%	Lindon	10,070	-3	-0.03%
Loa	572	-92	-16.08%	Loa	572	5	0.87%
Logan	48,174	-117	-0.24%	Logan	48,174	43	0.09%
Lyman	258	72	27.91%	Lyman	258	0	0.00%
Lynndyl	106	8	7.55%	Lynndyl	106	9	8.49%
Manila	310	-93	-30.00%	Manila	310	-81	-26.13%
Manti	3,276	-192	-5.86%	Manti	3,276	-32	-0.98%
Mantua	687	13	1.89%	Mantua	687	6	0.87%
Mapleton	7,979	146	1.83%	Mapleton	7,979	-34	-0.43%
Marriott-Slaterville	1,701	51	3.00%	Marriott-Slaterville	1,701	38	2.23%
Marysvale	408	-5	-1.23%	Marysvale	408	-20	-4.90%
Mayfield	496	-31	-6.25%	Mayfield	496	-80	-16.13%
Meadow	310	-82	-26.45%	Meadow	310	-47	-15.16%
Mendon	1,282	-15	-1.17%	Mendon	1,282	5	0.39%
Midvale	27,964	-239	-0.85%	Midvale	27,964	-101	-0.36%
Midway	3,845	-350	-9.10%	Midway	3,845	-111	-2.89%
Milford	1,409	9	0.64%	Milford	1,409	-20	-1.42%
Millville	1,829	38	2.08%	Millville	1,829	-53	-2.90%
Minersville	907	-24	-2.65%	Minersville	907	-1	-0.11%
Moab	5,046	-160	-3.17%	Moab	5,046	-8	-0.16%
Mona	1,547	-116	-7.50%	Mona	1,547	-77	-4.98%
Monroe	2,256	-31	-1.37%	Monroe	2,256	-50	-2.22%
Monticello	1,972	-83	-4.21%	Monticello	1,972	-32	-1.62%
Morgan	3,687	-94	-2.55%	Morgan	3,687	-38	-1.03%
Moroni	1,423	-82	-5.76%	Moroni	1,423	-28	-1.97%
Mount Pleasant	3,260	-159	-4.88%	Mount Pleasant	3,260	-45	-1.38%
Murray	46,746	262	0.56%	Murray	46,746	33	0.07%
Myton	569	-38	-6.68%	Myton	569	37	6.50%
Naples	1,755	-58	-3.30%	Naples	1,755	-29	-1.65%
Nephi	5,389	41	0.76%	Nephi	5,389	22	0.41%
New Harmony	207	-27	-13.04%	New Harmony	207	-20	-9.66%
Newton	789	-53	-6.72%	Newton	789	-26	-3.30%
Nibley	5,438	-232	-4.27%	Nibley	5,438	-9	-0.17%
North Logan	8,269	-107	-1.29%	North Logan	8,269	37	0.45%
North Ogden	17,357	49	0.28%	North Ogden	17,357	-31	-0.18%
North Salt Lake	16,322	-86	-0.53%	North Salt Lake	16,322	-7	-0.04%
Oak City	578	-132	-22.84%	Oak City	578	-21	-3.63%
Oakley	1,470	-28	-1.90%	Oakley	1,470	19	1.29%
Ogden	82,825	-62	-0.07%	Ogden	82,825	-11	-0.01%
Ophir	38	46	121.05%	Ophir	38	-2	-5.26%
Orangeville	1,470	-151	-10.27%	Orangeville	1,470	-44	-2.99%

Differential Privacy

Municipalities

Orderville	577	-37	-6.41%	Orderville	577	34	5.89%
Orem	88,328	-279	-0.32%	Orem	88,328	-21	-0.02%
Panguitch	1,520	12	0.79%	Panguitch	1,520	-31	-2.04%
Paradise	904	0	0.00%	Paradise	904	-6	-0.66%
Paragonah	488	-9	-1.84%	Paragonah	488	-13	-2.66%
Park City	7,558	-85	-1.12%	Park City	7,558	41	0.54%
Parowan	2,790	-4	-0.14%	Parowan	2,790	-6	-0.22%
Payson	18,294	-484	-2.65%	Payson	18,294	13	0.07%
Perry	4,512	-46	-1.02%	Perry	4,512	-53	-1.17%
Plain City	5,476	-159	-2.90%	Plain City	5,476	13	0.24%
Pleasant Grove	33,509	-104	-0.31%	Pleasant Grove	33,509	15	0.04%
Pleasant View	7,979	-120	-1.50%	Pleasant View	7,979	-51	-0.64%
Plymouth	414	-42	-10.14%	Plymouth	414	20	4.83%
Portage	245	-5	-2.04%	Portage	245	-30	-12.24%
Price	8,715	-175	-2.01%	Price	8,715	1	0.01%
Providence	7,075	-64	-0.90%	Providence	7,075	-20	-0.28%
Provo	112,488	-417	-0.37%	Provo	112,488	2	0.00%
Randolph	464	-52	-11.21%	Randolph	464	-70	-15.09%
Redmond	730	-130	-17.81%	Redmond	730	-85	-11.64%
Richfield	7,551	-56	-0.74%	Richfield	7,551	-50	-0.66%
Richmond	2,470	-14	-0.57%	Richmond	2,470	-23	-0.93%
River Heights	1,734	27	1.56%	River Heights	1,734	-45	-2.60%
Riverdale	8,426	-43	-0.51%	Riverdale	8,426	19	0.23%
Riverton	38,753	-236	-0.61%	Riverton	38,753	-102	-0.26%
Rockville	245	-56	-22.86%	Rockville	245	-57	-23.27%
Rocky Ridge	733	41	5.59%	Rocky Ridge	733	28	3.82%
Roosevelt	6,046	-84	-1.39%	Roosevelt	6,046	14	0.23%
Roy	36,884	-370	-1.00%	Roy	36,884	25	0.07%
Rush Valley	447	-92	-20.58%	Rush Valley	447	-58	-12.98%
Salem	6,423	79	1.23%	Salem	6,423	-1	-0.02%
Salina	2,489	-44	-1.77%	Salina	2,489	14	0.56%
Salt Lake City	186,440	697	0.37%	Salt Lake City	186,440	29	0.02%
Sandy	87,461	-776	-0.89%	Sandy	87,461	297	0.34%
Santa Clara	6,003	-90	-1.50%	Santa Clara	6,003	9	0.15%
Santaquin	9,128	32	0.35%	Santaquin	9,128	61	0.67%
Saratoga Springs	17,781	-218	-1.23%	Saratoga Springs	17,781	24	0.13%
Scipio	327	56	17.13%	Scipio	327	-35	-10.70%
Scofield	24	52	216.67%	Scofield	24	5	20.83%
Sigurd	429	-118	-27.51%	Sigurd	429	-49	-11.42%
Smithfield	9,495	-310	-3.26%	Smithfield	9,495	-21	-0.22%
Snowville	167	-56	-33.53%	Snowville	167	-20	-11.98%
South Jordan	50,418	-16	-0.03%	South Jordan	50,418	-32	-0.06%
South Ogden	16,532	-225	-1.36%	South Ogden	16,532	44	0.27%
South Salt Lake	23,617	-224	-0.95%	South Salt Lake	23,617	-22	-0.09%

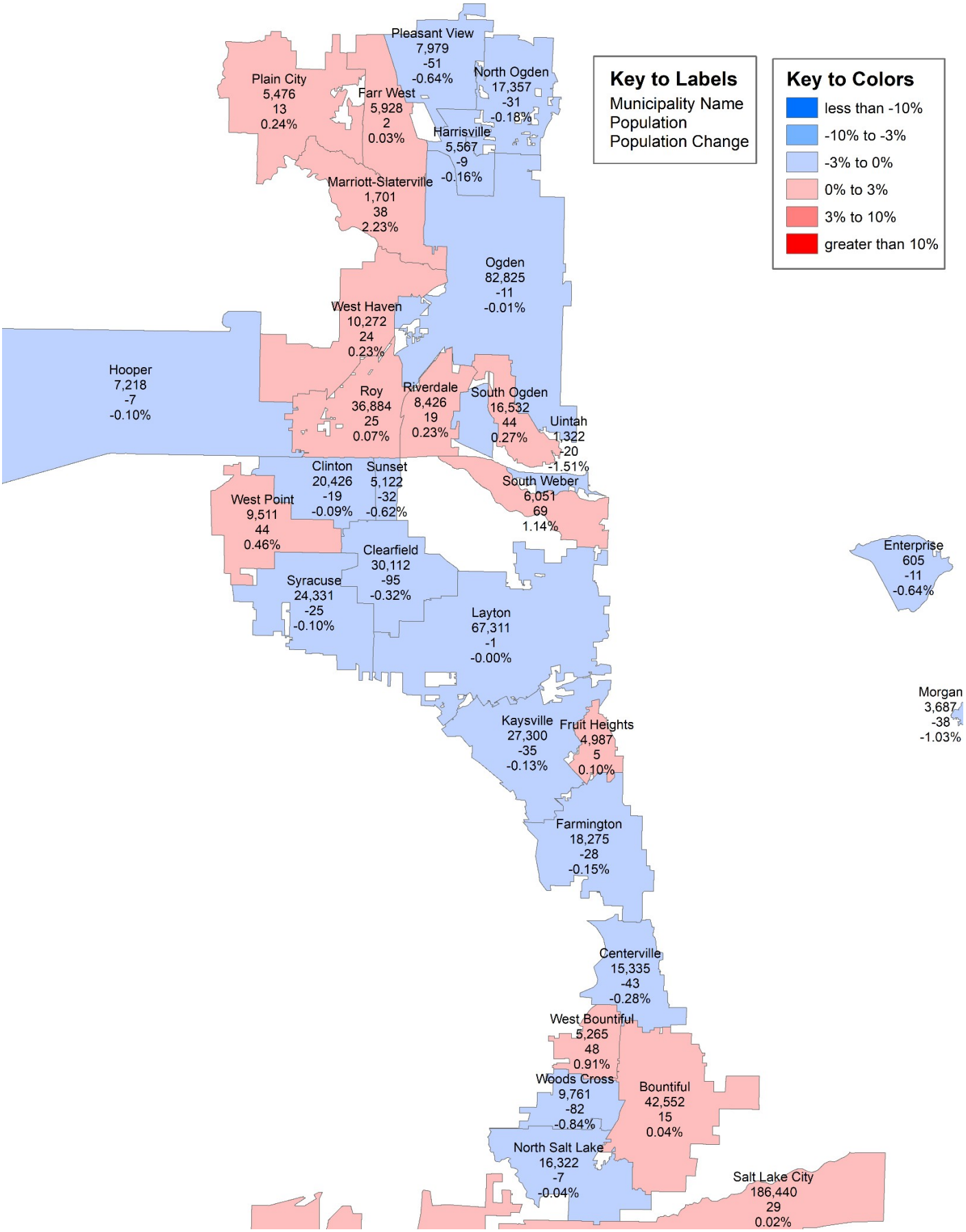
Differential Privacy

Municipalities

South Weber	6,051	27	0.45%	South Weber	6,051	69	1.14%
Spanish Fork	34,691	-482	-1.39%	Spanish Fork	34,691	3	0.01%
Spring City	988	-192	-19.43%	Spring City	988	14	1.42%
Springdale	529	-75	-14.18%	Springdale	529	-34	-6.43%
Springville	29,466	28	0.10%	Springville	29,466	-29	-0.10%
St. George	72,897	-88	-0.12%	St. George	72,897	-65	-0.09%
Sterling	262	-31	-11.83%	Sterling	262	29	11.07%
Stockton	616	113	18.34%	Stockton	616	-11	-1.79%
Sunnyside	377	25	6.63%	Sunnyside	377	20	5.31%
Sunset	5,122	33	0.64%	Sunset	5,122	-32	-0.62%
Syracuse	24,331	-213	-0.88%	Syracuse	24,331	-25	-0.10%
Tabiona	171	-92	-53.80%	Tabiona	171	-21	-12.28%
Taylorsville	58,652	59	0.10%	Taylorsville	58,652	-12	-0.02%
Tooele	31,605	-174	-0.55%	Tooele	31,605	-24	-0.08%
Toquerville	1,370	-68	-4.96%	Toquerville	1,370	-41	-2.99%
Torrey	182	82	45.05%	Torrey	182	-1	-0.55%
Tremonton	7,647	-97	-1.27%	Tremonton	7,647	-23	-0.30%
Trenton	464	93	20.04%	Trenton	464	10	2.16%
Tropic	530	-53	-10.00%	Tropic	530	-17	-3.21%
Uintah	1,322	60	4.54%	Uintah	1,322	-20	-1.51%
Vernal	9,089	54	0.59%	Vernal	9,089	18	0.20%
Vernon	243	-27	-11.11%	Vernon	243	-1	-0.41%
Vineyard	139	35	25.18%	Vineyard	139	34	24.46%
Virgin	596	-59	-9.90%	Virgin	596	-9	-1.51%
Wales	302	63	20.86%	Wales	302	34	11.26%
Wallsburg	250	23	9.20%	Wallsburg	250	22	8.80%
Washington	18,761	64	0.34%	Washington	18,761	27	0.14%
Washington Terrace	9,067	-31	-0.34%	Washington Terrace	9,067	-11	-0.12%
Wellington	1,676	-35	-2.09%	Wellington	1,676	-56	-3.34%
Wellsville	3,432	12	0.35%	Wellsville	3,432	65	1.89%
Wendover	1,400	-13	-0.93%	Wendover	1,400	-12	-0.86%
West Bountiful	5,265	62	1.18%	West Bountiful	5,265	48	0.91%
West Haven	10,272	-37	-0.36%	West Haven	10,272	24	0.23%
West Jordan	103,712	-313	-0.30%	West Jordan	103,712	-25	-0.02%
West Point	9,511	35	0.37%	West Point	9,511	44	0.46%
West Valley City	129,480	-408	-0.32%	West Valley City	129,480	-20	-0.02%
Willard	1,772	-65	-3.67%	Willard	1,772	-4	-0.23%
Woodland Hills	1,344	-121	-9.00%	Woodland Hills	1,344	-7	-0.52%
Woodruff	180	11	6.11%	Woodruff	180	-28	-15.56%
Woods Cross	9,761	-115	-1.18%	Woods Cross	9,761	-82	-0.84%

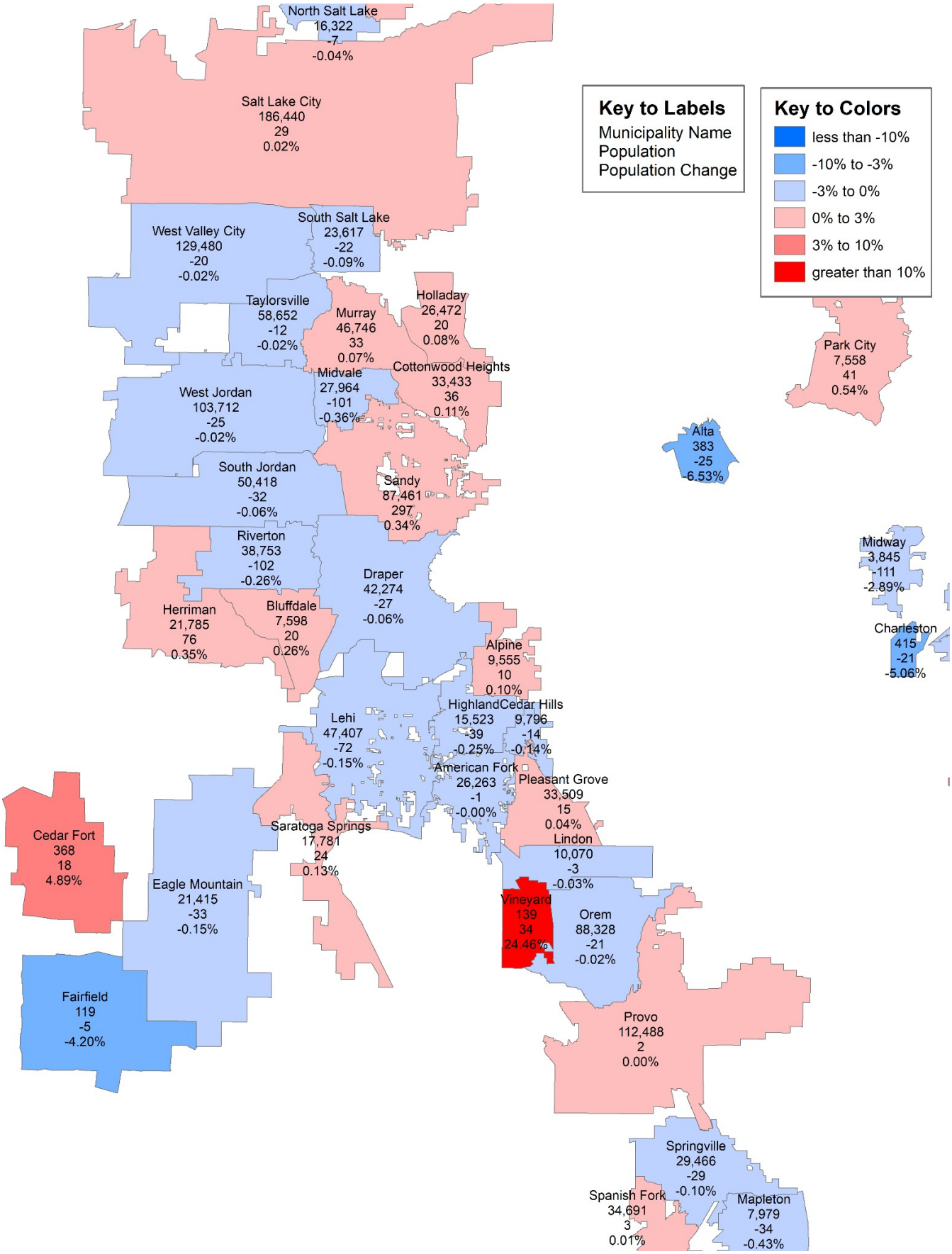
Differential Privacy

Select Municipalities



Differential Privacy

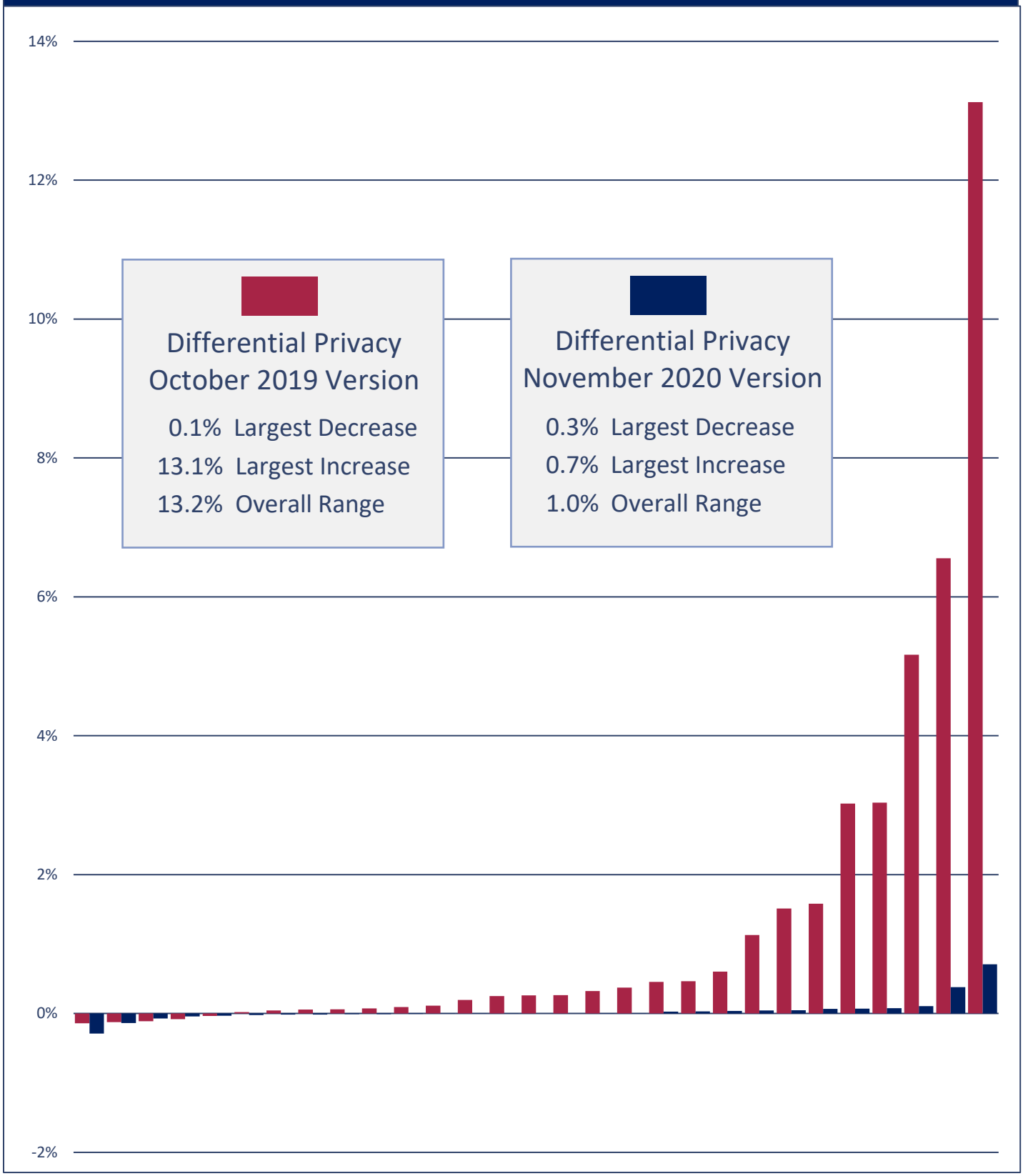
Select Municipalities



Differential Privacy

Counties

Differential Privacy Applied to 2010 County Populations



Differential Privacy Applied to 2010 County Populations

Key to Colors

- less than -0.12%
- -0.12% to -0.05%
- -0.05% to 0%
- 0% to 1.00%
- 1.00% to 7.00%
- greater than 7.00%

October 2019 Version

County	2010 Redistricting Population	Number	Percent
Davis	306,479	-433	-0.14%
Washington	138,115	-173	-0.13%
Utah	516,564	-570	-0.11%
Weber	231,236	-191	-0.08%
Salt Lake	1,029,655	-374	-0.04%
Tooele	58,218	11	0.02%
Box Elder	49,975	22	0.04%
Sanpete	27,822	16	0.06%
Uintah	32,588	20	0.06%
Cache	112,656	82	0.07%
Iron	46,163	43	0.09%
Summit	36,324	41	0.11%
Kane	7,125	14	0.20%
San Juan	14,746	37	0.25%
Grand	9,225	24	0.26%
Wasatch	23,530	62	0.26%
Duchesne	18,607	60	0.32%
Carbon	21,403	80	0.37%
Emery	10,976	50	0.46%
Sevier	20,802	97	0.47%
Morgan	9,469	57	0.60%
Beaver	6,629	75	1.13%
Millard	12,503	189	1.51%
Juab	10,246	162	1.58%
Wayne	2,778	84	3.02%
Garfield	5,172	157	3.04%
Rich	2,264	117	5.17%
Piute	1,556	102	6.56%
Daggett	1,059	139	13.13%

November 2020 Version

County	2010 Redistricting Population	Number	Percent
Wayne	2,778	-8	-0.29%
Morgan	9,469	-13	-0.14%
Kane	7,125	-5	-0.07%
Sevier	20,802	-9	-0.04%
Carbon	21,403	-7	-0.03%
Grand	9,225	-2	-0.02%
Uintah	32,588	-5	-0.02%
Sanpete	27,822	-4	-0.01%
Cache	112,656	-11	-0.01%
Washington	138,115	-13	-0.01%
Summit	36,324	-2	-0.01%
Davis	306,479	-7	0.00%
Weber	231,236	-2	0.00%
Salt Lake	1,029,655	-1	0.00%
Duchesne	18,607	0	0.00%
Emery	10,976	0	0.00%
Utah	516,564	1	0.00%
Tooele	58,218	2	0.00%
Box Elder	49,975	13	0.03%
Iron	46,163	14	0.03%
Wasatch	23,530	9	0.04%
Rich	2,264	1	0.04%
Millard	12,503	6	0.05%
San Juan	14,746	10	0.07%
Juab	10,246	7	0.07%
Garfield	5,172	4	0.08%
Beaver	6,629	7	0.11%
Daggett	1,059	4	0.38%
Piute	1,556	11	0.71%

Differential Privacy Applied to 2010 County Populations

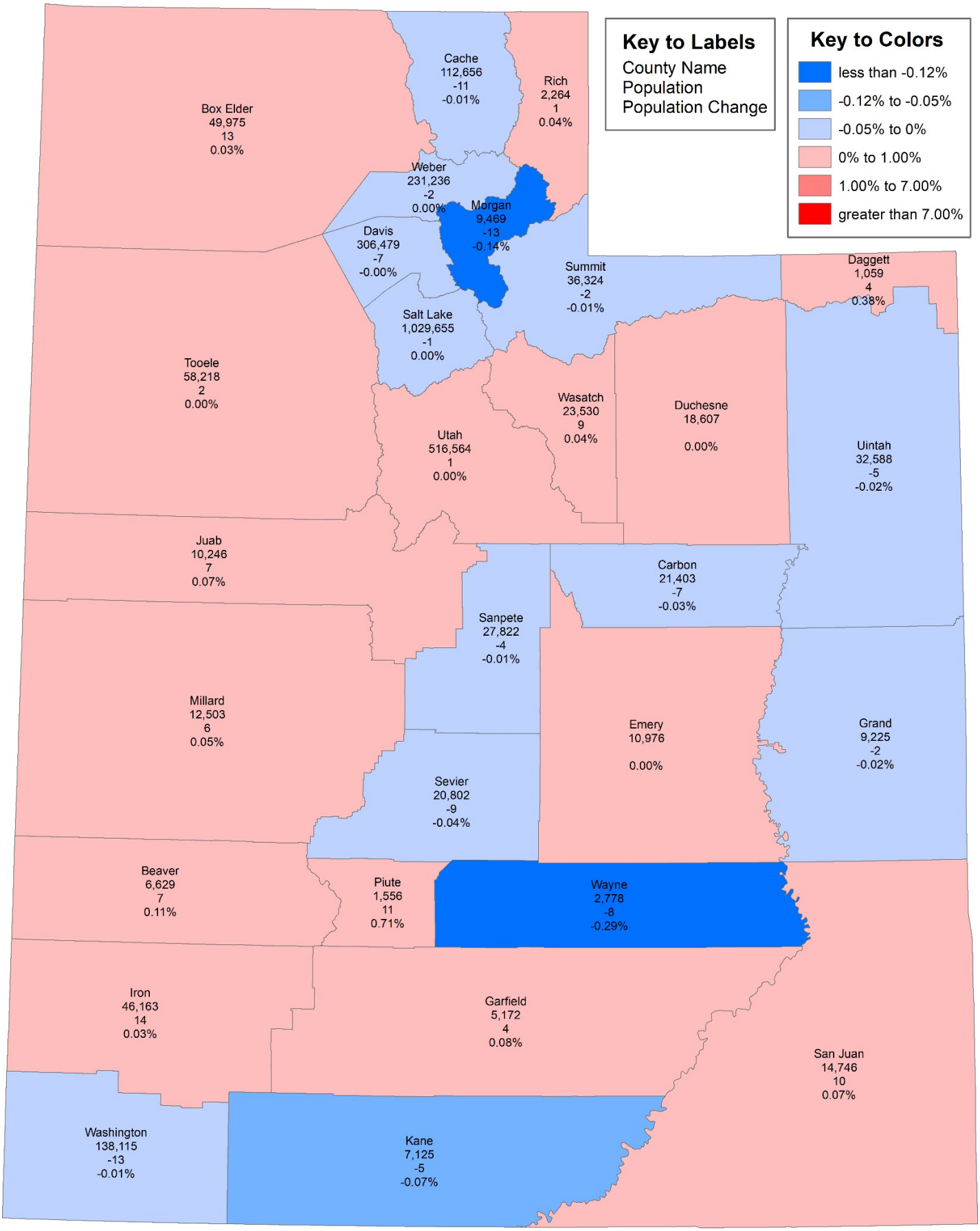
Key to Colors

- less than -0.12%
- -0.12% to -0.05%
- -0.05% to 0%
- 0% to 1.00%
- 1.00% to 7.00%
- greater than 7.00%

October 2019 Version				November 2020 Version			
County	**2010 Redistricting Population**	**Number**	**Percent**	**County**	**2010 Redistricting Population**	**Number**	**Percent**
Beaver	6,629	75	1.13%	Beaver	6,629	7	0.11%
Box Elder	49,975	22	0.04%	Box Elder	49,975	13	0.03%
Cache	112,656	82	0.07%	Cache	112,656	-11	-0.01%
Carbon	21,403	80	0.37%	Carbon	21,403	-7	-0.03%
Daggett	1,059	139	13.13%	Daggett	1,059	4	0.38%
Davis	306,479	-433	-0.14%	Davis	306,479	-7	0.00%
Duchesne	18,607	60	0.32%	Duchesne	18,607	0	0.00%
Emery	10,976	50	0.46%	Emery	10,976	0	0.00%
Garfield	5,172	157	3.04%	Garfield	5,172	4	0.08%
Grand	9,225	24	0.26%	Grand	9,225	-2	-0.02%
Iron	46,163	43	0.09%	Iron	46,163	14	0.03%
Juab	10,246	162	1.58%	Juab	10,246	7	0.07%
Kane	7,125	14	0.20%	Kane	7,125	-5	-0.07%
Millard	12,503	189	1.51%	Millard	12,503	6	0.05%
Morgan	9,469	57	0.60%	Morgan	9,469	-13	-0.14%
Piute	1,556	102	6.56%	Piute	1,556	11	0.71%
Rich	2,264	117	5.17%	Rich	2,264	1	0.04%
Salt Lake	1,029,655	-374	-0.04%	Salt Lake	1,029,655	-1	0.00%
San Juan	14,746	37	0.25%	San Juan	14,746	10	0.07%
Sanpete	27,822	16	0.06%	Sanpete	27,822	-4	-0.01%
Sevier	20,802	97	0.47%	Sevier	20,802	-9	-0.04%
Summit	36,324	41	0.11%	Summit	36,324	-2	-0.01%
Tooele	58,218	11	0.02%	Tooele	58,218	2	0.00%
Uintah	32,588	20	0.06%	Uintah	32,588	-5	-0.02%
Utah	516,564	-570	-0.11%	Utah	516,564	1	0.00%
Wasatch	23,530	62	0.26%	Wasatch	23,530	9	0.04%
Washington	138,115	-173	-0.13%	Washington	138,115	-13	-0.01%
Wayne	2,778	84	3.02%	Wayne	2,778	-8	-0.29%
Weber	231,236	-191	-0.08%	Weber	231,236	-2	0.00%

Differential Privacy

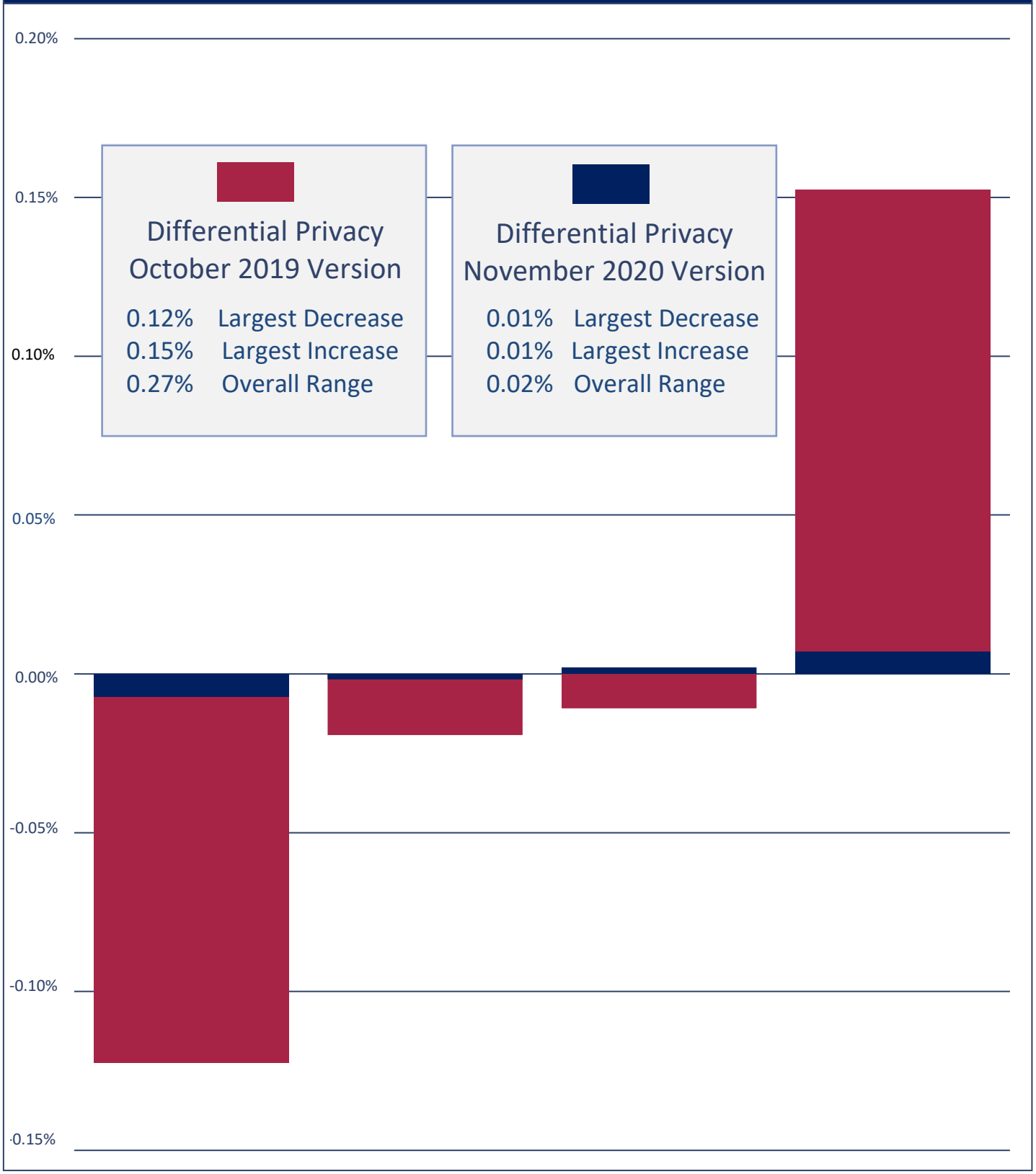
Counties



Differential Privacy

Congressional Districts

Differential Privacy Applied to 2010 Congressional District Populations



Differential Privacy

Congressional Districts

Differential Privacy Applied to 2010 Congressional District Populations

Key to Colors

- Less than -0.100%
- -0.100% to -0.020%
- -0.020% to 0.000%
- 0.000% to 0.020%
- 0.020% to 0.100%
- greater than 0.100%

October 2019 Version				November 2020 Version			
District	2010 Redistricting Population	Number	Percent	District	2010 Redistricting Population	Number	Percent
4	690,971	-846	-0.122%	4	690,971	-50	-0.007%
3	690,972	-133	-0.019%	2	690,971	-12	-0.002%
1	690,971	-75	-0.011%	1	690,971	14	0.002%
2	690,971	1054	0.153%	3	690,972	48	0.007%

Differential Privacy Applied to 2010 Congressional District Populations

Key to Colors

- Less than -0.100%
- -0.100% to -0.020%
- -0.020% to 0.000%
- 0.000% to 0.020%
- 0.020% to 0.100%
- greater than 0.100%

October 2019 Version				November 2020 Version			
District	2010 Redistricting Population	Number	Percent	District	2010 Redistricting Population	Number	Percent
1	690,971	-75	-0.011%	1	690,971	14	0.002%
2	690,971	1054	0.153%	2	690,971	-12	-0.002%
3	690,972	-133	-0.019%	3	690,972	48	0.007%
4	690,971	-846	-0.122%	4	690,971	-50	-0.007%

Differential Privacy

Congressional Districts