AN ESRI
WHITE PAPER

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Methodology Statement: Vintage 2020 Esri Time Series Totals

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Table of Contents

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Introduction

The year 2020 marks the second annual release of Esri's Time Series estimates for total population, households, and housing units. Esri's Time Series database contains data for every year between the prior decennial census and Esri's current estimates at all levels of geography down to the block group level. For 2020, the Time Series covers the entire decade from 2010 to 2020. This database provides users with valuable insight into the past to evaluate trends and patterns.

Data Sources and Model

Esri's Time Series estimates are released annually alongside the current year estimates of total population, households, and housing units. With each annual release, the *entire* Time Series is revised from July 1, 2010, through July 1 of the year prior to the current release of Esri's Updated Demographics. The revised Time Series estimates fill the void between Census 2010 and Updated Demographics, providing a historical view from the census year to the current year. Since the estimates for all years will be revised each year, the Time Series estimates are referred to by their "vintage," using the current year to denote the vintage of the Time Series estimates. Therefore, the Vintage 2020 Time Series includes estimates for July 1, 2010, through July 1, 2020.

The decennial census is a snapshot of the population on April 1, 2010. Esri's Time Series begins with a July 1, 2010, point estimate. This July 1 estimate includes a multitude of corrections made to the census via notes and errata from the Census Bureau as well as research performed by Esri throughout the decade. The July 1, 2010, estimate not only gives Esri the opportunity to make improvements to census counts but also allows for a uniform year-over-year data series based on a standard point in time. Typical census errors include missed housing units, housing units counted where there are none, and group quarters that were misclassified or counted in the wrong location. Esri fixes these errors and omissions whenever possible to ensure that the Time Series has a solid and stable base to build upon.

Demographic change has traditionally been measured by comparing the prior decennial census to estimates from the current year of Esri Updated Demographics. Prior to the release of Time Series estimates, changes such as methodological improvements and the integration of new source data precluded comparison of estimates from the current year to prior years. Time Series estimates make every attempt to build a consistent temporal dataset that can be used to evaluate year-over-year change since the prior decennial census. Model inputs are backfilled when possible, and erratic change has been dampened throughout the database. In many cases where modeling proved consistent, the Time Series estimates will be unchanged from Esri's annual release of Updated Demographics.

Standard statistical and political geography changes are made throughout the

decade. To conduct meaningful and accurate analysis, geographic areas must be stable. Time Series estimates utilize the most recent geographic boundaries for all years of data. This is particularly valuable for geographies that change on a regular basis such as ZIP codes, places, congressional districts, and Core Based Statistical Areas.

Esri's Data Development Team

Led by chief demographer Kyle R. Cassal, Esri's data development team has a 35-year history of excellence in market intelligence. The team's economists, statisticians, demographers, geographers, and analysts produce independent small-area demographic and socioeconomic estimates and forecasts for the United States. The team develops exclusive demographic models and methodologies to create market-proven datasets, many of which are now industry benchmarks such as Tapestry™ Segmentation, Consumer Spending, Market Potential, and annual Updated Demographics. Esri® demographics powers the ArcGIS® platform through dynamic web maps, data enrichment, reports, and infographics.

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Esri, the global market leader in geographic information system (GIS) software, offers the most powerful mapping and spatial analytics technology available.

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