

2020 Census Participant Statistical Areas Program (PSAP) Tribal Respondent Guide

Instructions for Using the Geographic Update Partnership Software (GUPS)
February 2019



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INTRODUCTION

A. General Information

The 2020 Census Participant Statistical Areas Program (PSAP) provides designated participants the opportunity to review and suggest changes to the boundaries and names for statistical geographic areas, based on U.S. Census Bureau criteria and guidelines. Tribal governments and data users often need data by smaller, statistical geographies for planning purposes. The Census Bureau uses these statistical geographies, in addition to the legal geographies, to tabulate and disseminate data for the Decennial Census, Economic Census, and American Community Survey (ACS).

The Census Bureau establishes and maintains both standard and tribal statistical geographies solely for statistical purposes and does not take into account or attempt to anticipate any non-statistical uses that may be made of their definitions. The Census Bureau will not modify the criteria for, or boundaries of, statistical areas to meet the requirements of any non-statistical program. Subsequent sections of this Respondent Guide detail each statistical geography's criteria, standards, and thresholds. In addition, the *Federal Register* notices also provide a formal resource for the criteria, standards, and thresholds.

The Census Bureau intends for the PSAP to be a process open to all interested parties and strongly recommends that primary participants seek input from other tribal census data users and stakeholders. Tribal participants bring an important wealth of knowledge necessary to delineate statistical areas that best meet tribal needs and development patterns. The census data disseminated by the tribal geographies help tribal leaders and decision makers understand what their communities need. Many tribal communities use census information to attract new business, plan for growth, plan new facilities, and new programs for the communities they serve.

B. The 2020 Census Participant Statistical Areas Program (PSAP)

For 2020, there are two categories of statistical geographies eligible for review and update during PSAP: standard statistical geography and tribal statistical geography. Tribal statistical geographies were part of the Tribal Statistical Areas Program (TSAP) for 2010, but are part of PSAP for 2020.

All of the tribal statistical geographies are listed below, but [Part 1](#) of this respondent guide details the criteria for the tribal statistical geographies editable in the Geographic Update Partnership Software (GUPS); e.g., tribal census tracts, tribal block groups, and census designated places. The remaining tribal geographies are editable only with paper materials and are not included in this material. They are included in the Tribal Paper Respondent Guide.

Standard statistical geography includes the following:

- Census tracts.
- Block groups.
- Census designated places (CDPs).
- Census county divisions (CCDs), in 21 states.

Tribal statistical geography includes the following:

- Tribal census tracts.
- Tribal block groups.
- Census designated places (CDPs).
- Alaska Native village statistical areas (ANVSAs).
- Oklahoma tribal statistical areas (OTSAs) and OTSA tribal subdivisions.
- Tribal Designated Statistical Areas (TDSAs).
- State Designated Tribal Statistical Areas (SDTSAs).
- Alaska Native Regional Corporations (ANRCs) and State American Indian Reservations (SAIRs).¹

All tribal statistical participants receive paper maps for 2020 Census PSAP. Federally recognized American Indian Areas (AIA) with a reservation and/or off-reservation trust land can use GUPS or paper maps to make updates to tribal census tracts, tribal block groups, and census designated places. Details on the use of GUPS to update those three geographies are included in this Respondent Guide. Find details on the use of paper maps in the Tribal Paper Respondent Guide.

IMPORTANT: AIA participants must use either GUPS or paper maps, but not both to complete their 2020 Census PSAP work. The Census Bureau only accepts one method of update per tribal participant.

To gain a better understanding of how PSAP geographies relate to one another and to other geographies, refer to [Figure 1](#) and [Figure 2](#).

¹ ANRCs and SAIRs are not statistical areas, but they are included in 2020 Census PSAP for administrative reasons.

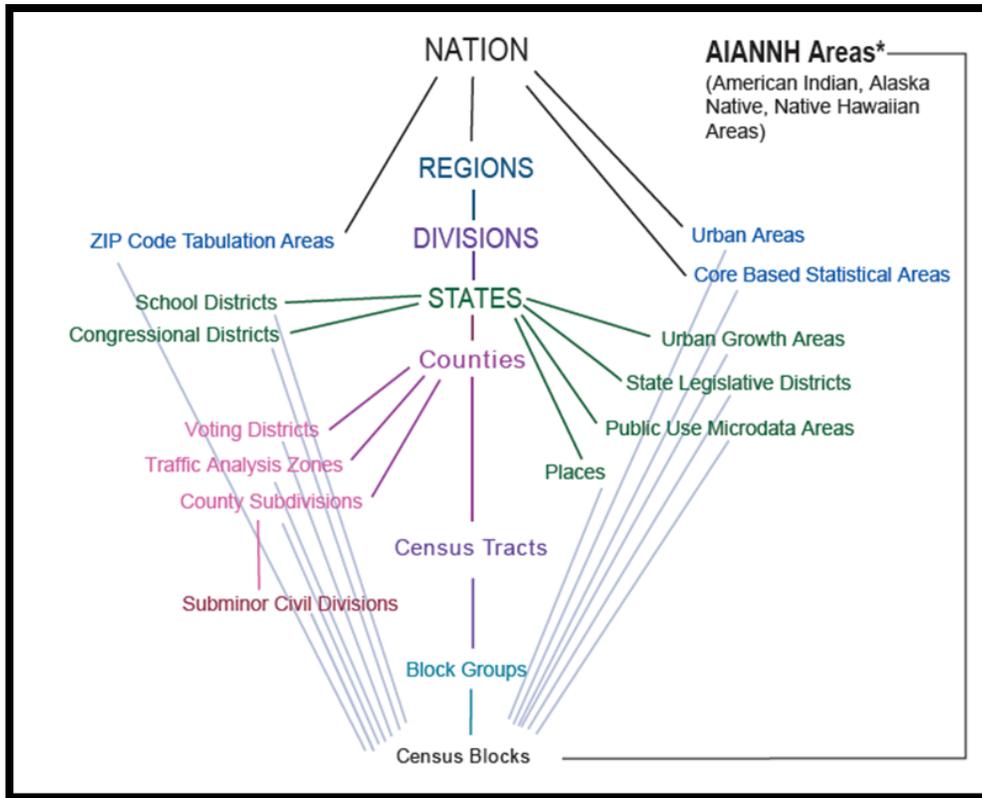


Figure 1. Standard Hierarchy of Census Geographic Entities

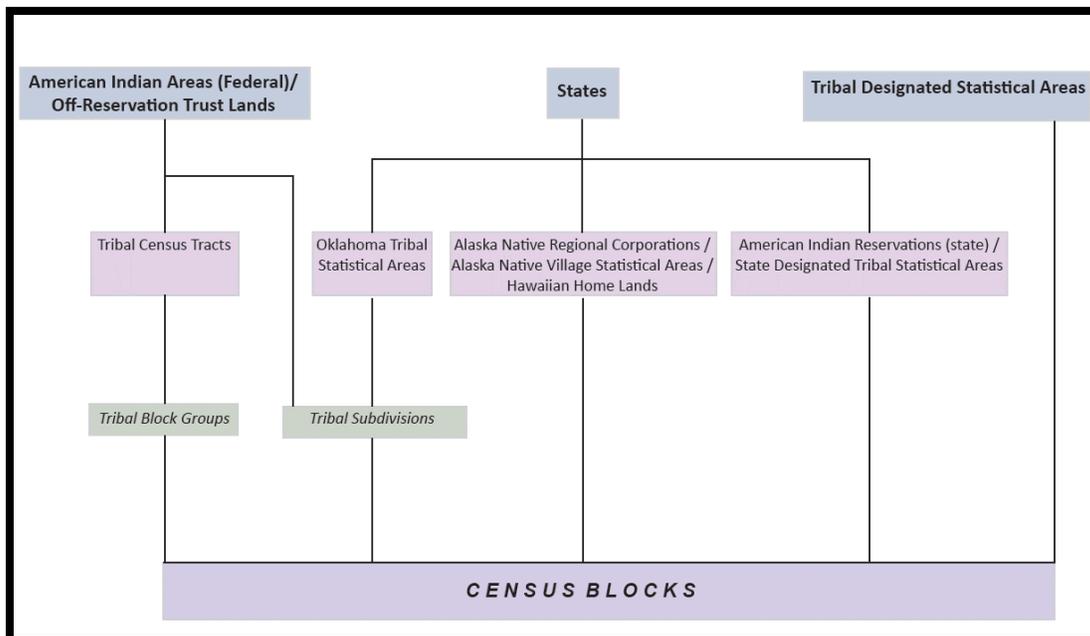


Figure 2. Hierarchy of American Indian, Alaska Native, and Native Hawaiian Areas

C. The Boundary and Annexation Survey (BAS)

The Boundary and Annexation Survey (BAS) is the annual Census Bureau survey of legal geographic entities that includes federal American Indian reservations (AIRs), off-reservation trust lands (ORTLs), and any associated tribal subdivisions. Whereas the PSAP provides the process for reviewing and updating the AIAs that are statistical geographic entities, the BAS provides the process for reviewing and updating AIAs that are legal federal geographic entities, such as the reservation itself, legal tribal subdivisions and ORTLs. Its purpose is to determine, solely for data collection and tabulation by the Census Bureau, the complete and current inventory and the correct names, legal descriptions, official status, and official, legal boundaries of the legal geographic entities with governmental authority over certain areas within the United States, as of January 1 of the survey year. The BAS also collects specific information to document the legal actions that established a boundary or imposed a boundary change. In support of the government-to-government relationship with federally recognized American Indian tribes, the Census Bureau works directly with tribal officials on the BAS. Through the BAS, the Census Bureau also accepts updates to features such as roads or rivers, and address range break information at the boundaries. To update the legal boundaries for a reservation, off-reservation trust lands or legal tribal subdivisions, please participate in the BAS.

For information regarding the BAS, consult the Census Bureau’s BAS website at <<https://www.census.gov/programs-surveys/bas.html>>. For questions, email geo.bas@census.gov or call 1-800-972-5651.

D. 2020 Census PSAP Schedule

Table 1 provides the PSAP program schedule and timeframe for completion of the various tasks. Understanding the 2020 Census PSAP schedule is important for participants to prepare for the delineation and verification phases.

Table 1: 2020 Census PSAP Schedule

Date	Event
March-May 2018	Census Bureau contacted 2010 Census TSAP participants to inquire about 2020 Census PSAP participation.
July 2018	Census Bureau began sending 2020 Census PSAP invitation materials to participants.
January 2019	PSAP delineation phase begins. Participants have 120 calendar days to submit updates.
January 2019	PSAP webinar trainings begin.
July 2019	Census Bureau sends official communication notifying closeout of PSAP delineation phase.
January 2020	PSAP verification phase begins. Participants have 90 calendar days to review updates.
October 2020	Census Bureau conducts closeout of the 2020 Census PSAP.

The PSAP delineation phase begins in January 2019 with the delivery of delineation materials. Participants have a maximum of 120 days from the receipt of materials to complete and submit any statistical geography updates to the Census Bureau. The closeout of the delineation phase begins in the summer of 2019 prior to the start of the verification phase in January 2020. A final closeout occurs after the conclusion of the verification phase in October 2020.

In March 2018, the Census Bureau began contacting previous participants from the 2010 program, regional multi-county organizations, local governments, state data centers, and other interested individuals to solicit participation in the 2020 Census PSAP.² The Census Bureau began formally inviting the interested participants in July 2018.

E. Training and Support

The Census Bureau provides assistance by answering questions; clarifying criteria, guidelines, and procedures; and providing information concerning specific situations that participants encounter when reviewing, delineating, and submitting their statistical area plans. The Census Bureau plans to conduct training webinars to provide instruction on participating in PSAP and the use of the GUPS. The webinar schedule is available at <<https://www.census.gov/programs-surveys/decennial-census/about/psap.html>>. In addition, an electronic version of this guide is available on that website. For questions concerning technical problems with the GUPS application or specific programmatic questions, support is available via telephone at 1-844-788-4921 and email at geo.psap@census.gov.

F. Respondent Guide Organization

Federally recognized tribes with American Indian Reservations (AIRs) and/or off-reservation trust lands (ORTLs) reviewing tribal statistical area geographies may use the GUPS to make updates. In addition to providing the criteria and programmatic guidelines necessary to define and update tribal statistical geographies, this guide provides participants with systematic instructions of GUPS for use in PSAP. It also introduces the fundamental concepts of the software as well as the major functionalities developed and contained in the software and services. By using this guide and adhering to the PSAP guidelines and criteria, participants learn to utilize GUPS to review and update a variety of statistical geographies and submit their final updates to the Census Bureau. They also learn about the next steps for PSAP. This guide contains four parts.

Part 1 Overview of 2020 Census PSAP Materials and the Tribal Statistical Geographies³

This section provides an overview of the 2020 Census PSAP delineation materials and summarizes the statistical geography criteria and guidelines for tribal census tracts, tribal block groups and CDPs. Participants use the content within this section to familiarize themselves with the materials provided by the Census Bureau and with the background of the three tribal statistical geographies editable in GUPS.

² For Census Bureau purposes, the term “county” includes parishes in Louisiana; boroughs, city and boroughs, municipalities, and census areas in Alaska; independent cities in Maryland, Missouri, Nevada, and Virginia; districts and islands in American Samoa, and districts in the U.S. Virgin Islands; municipalities in the Commonwealth of the Northern Mariana Islands; municipios in the Commonwealth of Puerto Rico; and the areas constituting the District of Columbia and Guam. Henceforth in this document, the term “counties” will refer to all of these entities.

³ Within the document, **bold, blue colored font** denotes the presence of a cross-referenced hyperlink to other sections, figures, tables, or appendices. Use the Ctrl key and click of left mouse button while hovering over these **bold, blue words** to skip directly to the linked item. The “**Part 1**” above is the first cross-reference hyperlink in this document.

Part 2 Introducing GUPS for 2020 Census PSAP

This section introduces GUPS and the basics of the software. Participants refer to this section for the technical instructions to install GUPS, to learn how to get started, and to familiarize themselves with menus, buttons, and tools within the software.

Part 3 Using GUPS for 2020 Census PSAP

This section describes the use of GUPS for 2020 Census PSAP. It discusses the review and update of PSAP geographies. It provides instruction to validate a submission and to prepare it for delivery to the Census Bureau using the Secure Web Incoming Module (SWIM). Participants find information and detailed steps to review and modify the statistical geographies.

Part 4 Next Steps for 2020 Census PSAP

This section provides information on the next steps for 2020 Census PSAP. It includes information for participants on the Census Bureau's processing of submissions, the upcoming verification phase, and the final closeout phase after verification.

IMPORTANT: Due to operational updates, some minor discrepancies may occur between the appearance of individual screens within GUPS, especially concerning polygon colors and symbology in the Map View and the appearance of specific buttons and warning messages. Other small variations may also appear.

PART 1 OVERVIEW OF 2020 CENSUS PSAP MATERIALS AND THE TRIBAL STATISTICAL GEOGRAPHIES

This portion of the Respondent Guide lays the programmatic foundation for the remainder of the document and provides a reference for upcoming sections. It provides an overview of 2020 Census PSAP delineation materials and summarizes the statistical geography criteria and specifications for each of the three tribal statistical geographies editable using GUPS.

The goal of PSAP is to produce meaningful statistical geographies for data users while maintaining consistent statistical geography nationwide. It is the Census Bureau’s responsibility to ensure nationwide uniformity in applying the statistical area criteria and guidelines. As a result, we may require some changes in the boundaries or delineation of some statistical areas to meet the national standard.

Federally recognized tribal participants may use paper materials or GUPS to perform their review and make updates. By creating one, streamlined method of digital participation (i.e., the GUPS), the Census Bureau provides an efficient and intuitive system to review and update statistical boundaries and edit data layers while maintaining flexibility to retrieve and review selected information. Digital participants must use the Census Bureau supplied GUPS and shapefiles to participate in PSAP. The Census Bureau will not accept any submission delineated outside of the GUPS or based on non-Census Bureau provided shapefiles.

To accompany the GUPS, the Census Bureau is providing a set of paper maps to tribal participants that requested GUPS. In addition to the paper maps, the Census Bureau is providing corresponding Adobe .pdf files of the paper maps. The Adobe .pdf files are for reference only. For more information on these materials, refer to the Tribal Paper Respondent Guide.

Refer to [Table 2](#) to determine what level of tribal statistical geographies are eligible for review and update. All AIRs and ORTLs have at least one tribal census tract and one tribal block group. To obtain the 2010 Census population and housing counts for tribal census tracts and tribal block groups, refer to the 2010 population and housing unit counts file included with the PSAP materials. All federally recognized tribes with AIRs/ORTLs, regardless of population or housing unit counts are eligible to delineate CDPs. Refer to [Appendix E](#) for details on supplemental sources that can assist participants during 2020 Census PSAP.

Table 2: Tribal Statistical Areas Delineation Eligibility

Tribal Participant	Tribal Statistical Areas Eligible for Delineation
Federally recognized tribe with an American Indian reservation (AIR) and/or off-reservation trust land (ORTL) with population \geq 2,400 or housing units (HUs) \geq 960.	Tribal census tracts, tribal block groups, and census designated places (CDPs).
Federally recognized tribe with an AIR and/ORTL with population \geq 1,200 and $<$ 2,400 or HUs \geq 480 and $<$ 960.	Tribal block groups and census designated places (CDPs). One tribal census tract covering same area as the AIR and/or ORTL.
Federally recognized tribe with an AIR and/ORTL with population $<$ 1,200 or HUs $<$ 480.	Census designated places (CDPs). One tribal census tract and one tribal block group covering same area as the AIR and/or ORTL.

CHAPTER 1. DELINEATION PHASE MATERIALS FOR 2020 CENSUS PSAP

This chapter focuses on identifying the materials participants receive for the delineation phase.

1.1 Informational and Instructional Materials

The Census Bureau provides this Respondent Guide for conducting 2020 Census PSAP work using GUPS. To support tribal participants' review and update of their statistical geographies for the 2020 Census, the Census Bureau created Quick Reference and Quick Program Guides that summarize each tribal statistical geography and the digital delivery methods of the delineation materials. They created Microsoft Excel files of 2010 population and housing counts that identify the counts for each tribal census tract and tribal block group. Files of the 2010 counts exist for each federally recognized tribe with an AIR and/or ORTL. A separate Tribal Paper Respondent Guide provides detailed instructions for conducting the 2020 Census PSAP work using paper map materials.

Review [Table 3](#) to identify each piece of informational and instructional material distributed by the Census Bureau for tribal statistical geographies and to identify the tribal participants receiving those materials.

Table 3: Quick Reference, Quick Program, and Respondent Guide Materials

Document ID	Name of Material	Tribal Participant(s) Receiving Material
G-600	Quick Reference: Tribal Block Groups	Federally recognized tribe with an American Indian reservation (AIR) and/or off-reservation trust land (ORTL).
G-610	Quick Reference: Tribal Census Tracts	Federally recognized tribe with an American Indian reservation (AIR) and/or off-reservation trust land (ORTL).
G-615	Quick Reference: Census Designated Places	Federally recognized tribe with an American Indian reservation (AIR) and/or off-reservation trust land (ORTL).
Q-900	Quick Program Guide for Digital Download of GUPS	Federally recognized tribe with an American Indian reservation (AIR) and/or off-reservation trust land (ORTL) participants that prefer to download their materials online.
Q-905	Quick Program Guide for DVD delivery of GUPS	Federally recognized tribe with an American Indian reservation (AIR) and/or off-reservation trust land (ORTL) participants that prefer to use the DVDs for their materials.
G-690	Tribal GUPS Respondent Guide	Federally recognized tribe with an American Indian reservation (AIR) and/or off-reservation trust land (ORTL).
G-700	Tribal Paper Respondent Guide	All tribal participants.

The 2010 population and housing counts file includes information for every tribal census tract and tribal block group. This file may prove beneficial outside of the GUPS environment. The naming convention for this file is "AIA<AIANNHCE>_2010_Pop_and_Housing_counts.xlsx,"

where AIANNHCE is the four-digit Census area code for the tribal entity, where AI is American Indian, AN is Alaska Native, and NH is Native Hawaiian. The file includes the following fields of information:

- AIA_NAME is the common name of the American Indian area.
- AIANNHCE is the four-digit Census AI/AN/NH area code.
- TTRACTCE is the six-digit tribal census tract code (four-digit tribal census tract with two-digit suffix), without the decimal point character. For the 2010 tribal census tracts, there were no suffixes, so these appear as (T00100) in the file.
- NAME is the common “name” of the tribal census tract. It is without the suffix information (T001).
- TBLKGRPCE is the one-character tribal block group code.
- TTRACTPOP is the 2010 population of the tribal census tract. It repeats if there is more than one tribal block group in the tribal census tract.
- TTRACTHOUSING is the 2010 housing count of the tribal census tract. It, like the TTRACTPOP, repeats if there is more than one tribal block group in the tribal census tract.
- TBGPOP is the 2010 population of the tribal block group.
- TBGHOUSING is the 2010 housing count of the tribal block group.

Federally recognized tribes with an AIR and/or ORTL can use the information to identify tribal census tracts and tribal block groups that fall outside of the population and housing thresholds explained in [Table 4](#) and [Table 6](#), respectively. The tribal geographies falling outside the thresholds need review for potential updates. Refer to [Section 8.1](#) for ideas regarding its use with reviewing the tribal census tracts and tribal block groups.

The Census Bureau provides all of these informational and instructional materials in printed and digital formats. Locate the digitally formatted materials on the PSAP website as well as on the “Data disc” described in [Section 1.3](#).

1.2 Map Materials

For 2020 Census PSAP, the Census Bureau provides all tribal entities with paper map materials and for reference only, Adobe .pdf files of the paper maps. Participants do not update the Adobe .pdf files. If tribal statistical updates are necessary or requested, tribal participants use GUPS or the paper maps. Refer to the Tribal Paper Respondent Guide for details of the paper maps and the Adobe .pdf files and instructions for their use.

1.3 DVD Materials

The Census Bureau supplies tribal entities that requested GUPS during the invitation phase two DVDs. One DVD contains the GUPS software to install on the participant’s computers. The second DVD is termed the “Data disc.” It contains the partnership shapefiles needed to conduct 2020 Census PSAP work using the GUPS software. The “Data disc” also contains digital copies of the Quick Reference and Quick Program Guides, both Respondent Guides, the Adobe .pdf files, and the Microsoft Excel file of the 2010 population and housing counts. Instructions for using these DVDs to begin 2020 Census PSAP review are in [Part 2](#).

All informational and instructional materials provided on DVD are available on the PSAP website for online download. The partnerships shapefiles are available directly within GUPS by

using the “Census Web” option discussed in [Section 6.1](#). There is no need to download the shapefiles from a Census Bureau website to load into GUPS. GUPS simplifies that step for participants choosing the “Census Web” option.

1.4 Delineation Phase Postcard

One very important item enclosed with the delineation materials is the delineation phase postcard (e.g., Document ID P-300). After reviewing the tribal statistical geographies and determining the update status of the materials, please complete the postcard indicating whether changes are forthcoming. The return of this postcard assists the Census Bureau with planning for incoming submissions and identifying participants that will not be providing updates. The Census Bureau requests the return of this postcard within a month of receipt of the delineation phase materials.

If a participant discovers changes are necessary to their 2020 Census PSAP materials after returning the delineation postcard, please contact the Census Bureau PSAP staff by email at geo.psap@census.gov, or phone them at 1-844-788-4921 to let them know a submission is forthcoming.

CHAPTER 2. TRIBAL CENSUS TRACTS

Tribal census tracts are relatively permanent geographic divisions of an AIR and/or ORTL defined for the tabulation and presentation of statistical data. They are conceptually similar and equivalent to census tracts defined within the standard state-county-tract geographic hierarchy used for tabulating and publishing statistical data. The Census Bureau defines tribal census tracts with tribal officials to provide meaningful, relevant, and reliable data for small geographic areas within the boundaries of federally recognized tribes with reservations or trust lands. As such, they recognize the unique statistical data needs of federally recognized American Indian tribes. The delineation of tribal census tracts allows for an unambiguous presentation of census tract-level data specific to the federally recognized AIR and/or ORTL without the imposition of state or county boundaries, which might artificially separate American Indian populations located within a single AIR and/or ORTL. To this end, the tribal participants may define tribal census tracts that cross county or state boundaries, or both.

Tribal census tracts submitted to the Census Bureau are subject to review to ensure compliance with the published criteria. Detailed criteria pertaining to tribal census tracts exists in a separate *Federal Register* notice pertaining to all American Indian areas, including statistical areas defined through the PSAP. The *Federal Register* notices for both standard and tribal geographies is available on the PSAP website. [Appendix B](#) provides a summary of the statistical geographies criteria thresholds.

IMPORTANT: All tribal census tracts must follow all of the final criteria and guidelines published for standard census tracts, EXCEPT they do not have to nest within states or counties. They must instead nest within an individual AIR and/or ORTL, and must include unique identification to distinguish them from standard census tracts.

The following criteria apply to reviewing, updating, and delineating 2020 tribal census tracts:

- Tribal census tracts may cross county or state boundaries.
- Tribal census tracts must not cross AIR and/or ORTL boundaries.
- Tribal census tracts must cover the entire land and water area of the AIR and/or ORTL.
- Tribal census tracts utilize the letter “T” and a three-digit code and may have a two-digit suffix. Find more detail on numbering of tribal census tracts in [Section 2.2](#).
- Tribal census tracts must meet specific population and housing unit thresholds outlined in [Table 4: Tribal Census Tract Thresholds](#).
- Tribal census tracts must comprise a reasonably compact and contiguous land area, with a few exceptions.⁴
- Tribal census tract boundaries should follow visible and identifiable features.

⁴ The Census Bureau permits noncontiguous boundaries only where a contiguous area or inaccessible area would not meet population or housing unit count requirements for a separate tribal census tract, in which case the noncontiguous or inaccessible area must be combined with an adjacent or proximate tract. For example, combine an island that does not meet the minimum population threshold for recognition as a separate tribal census tract with other proximate land to form a single, noncontiguous tribal census tract. The Census Bureau reviews each instance of noncontiguous census tracts and uses their discretion to accept or reject.

- Census tracts have three types for the 2020 Census, standard, tribal, and special use. Refer to [Table 4: Tribal Census Tract Thresholds](#) for the definition and associated criteria for tribal census tracts. The other two types do not appear in the table since they are out of scope for this material.

The Census Bureau may modify and, if necessary, reject any proposals for tribal census tracts that do not meet the published criteria. In addition, the Census Bureau reserves the right to modify the boundaries and attributes as needed to meet the published criteria and/or maintain geographic relationships before or after the final tabulation geography is set for the 2020 Census.

Table 4: Tribal Census Tract Thresholds

	Description	Population Thresholds	Housing Unit Thresholds	Area Measurement Thresholds	Employment Threshold
Tribal Census Tract	Tribal census tracts are statistical subdivisions of AIRs and/or ORTLs used for tabulating and publishing statistical data.	Optimum: 4,000 Min: 1,200 Max: 8,000	Optimum: 1,600 Min: 480 Max: 3,200	None	NA

2.1 Tribal Census Tract Threshold Requirements

Tribal census tracts must meet the population or housing unit thresholds outlined above in [Table 4: Tribal Census Tract Thresholds](#). This helps ensure a minimal level of reliability in the sample data and minimized potential disclosures of sensitive information. PSAP participants should aim to create tribal census tracts that meet the optimal population of 4,000 or 1,600 housing units and maintain the minimum thresholds with an AIR and/or ORTL with fewer than 1,200 people. The Census Bureau uses a housing unit criterion to accommodate seasonably occupied areas in which the decennial census population count will be lower than the ACS estimates.⁵

A tribal census tract that exceeds the maximum thresholds should be split into multiple tracts; those that drop below the minimum thresholds should be merged with an adjacent tribal census tract. If a participant chooses not to split or merge tribal census tracts that do not meet approved thresholds, they must provide a justification for retaining the existing geography. GUPS allows participants to add remarks or justifications to statistical geographies that are not changed in the event that population growth (new housing development, typically) or decline (following depopulation trends or scheduled housing demolition) is anticipated.

Participants should use the 2010 Census population and housing counts for tribal census tract review in most cases. This information is part of the data within GUPS and included in the Microsoft Excel file discussed in [Section 1.1](#). Locally produced population and housing unit estimates are permissible when reviewing and updating areas experiencing considerable growth since the 2010 Census.

⁵ "Occupied seasonally" refers to seasonal communities in which residential populations are lower on Census Day, April 1, than at other times of the year, and for which estimates may be reflected in the ACS. The ACS is designed to produce local area data for a 12-month period estimate.

The housing unit thresholds use the national average of 2.5 persons per household. Because of local and regional variations to this average, the Census Bureau will consider variation while reviewing all tribal census tract revisions.

2.2 Tribal Census Tract Codes and Numeric Identification

Tribal census tract codes begin with the letter “T” followed by three digits. For example, tribal census tract one on an AIR and/or ORTL will have a code of “T001.” Subsequent tribal census tracts increase sequentially, e.g., T002, T003, etc. This ensures that a tribal census tract code is used only once within the AIR and/or ORTL.

When splitting a tribal census tract, GUPS introduces a two-digit suffix. When merging, GUPS provides the next sequential tribal census tract number. Standard census tracts coded with a range of 9401 to 9499 have a majority of their population, housing units, and/or area included in AIRs and/or ORTLs.

2.3 Tribal Census Tract Boundary Requirements

Tribal census tract boundaries generally follow permanent, visible features that are identifiable in the field. The following features are preferred as tribal census tract boundaries:

- American Indian reservation and off-reservation trust land boundaries must always be tribal census tract boundaries.
- Visible, perennial natural and cultural features, such as roads, shorelines, rivers, perennial streams and canals, railroad tracks, or aboveground high-tension power lines.
- Boundaries of legal and administrative entities in selected states. See [Table 5](#) for states with acceptable minor civil division and incorporated place boundaries.
- Alaska Native Regional Corporation boundaries in Alaska.⁶
- Boundaries of large parks, forests, airports, penitentiaries/prisons, and or military installations if the boundaries are clearly visible.
- Some nonstandard visible features such as major ridgelines, aboveground pipelines, intermittent streams, or fence lines.
- Some nonstandard nonvisible features such as parcel boundaries, straight-line extensions and other lines-of-sight between acceptable visible features.

Table 5: Acceptable Minor Civil Division (MCD) and Incorporated Place Boundaries

State	All MCD Boundaries	Boundaries of MCDs Not Coincident with the Boundaries of Incorporated Places that themselves are MCDs	All Incorporated Place Boundaries	Only Conjoint Incorporated Place Boundaries
Alabama				X
Alaska				X
Arizona				X
Arkansas				X
California				X
Colorado				X
Connecticut	X		X	
Delaware				X

⁶ Insofar as such boundaries are unambiguous for allocating living quarters as part of 2020 Census activities.

State	All MCD Boundaries	Boundaries of MCDs Not Coincident with the Boundaries of Incorporated Places that themselves are MCDs	All Incorporated Place Boundaries	Only Conjoint Incorporated Place Boundaries
Florida				X
Georgia				X
Hawaii				X
Idaho				X
Illinois		X		X
Indiana	X			X
Iowa		X ⁷		X
Kansas		X ⁸		X
Kentucky				X
Louisiana				X
Maine	X		X	
Maryland				X
Massachusetts	X		X	X
Michigan		X		X
Minnesota				X
Mississippi				X
Missouri				X
Montana				X
Nebraska				X
Nevada				X
New Hampshire	X		X	
New Jersey	X		X	
New Mexico				X
New York	X		X	
North Carolina				X
North Dakota		X		X
Ohio		X		X
Oklahoma				X
Oregon				X
Pennsylvania	X		X	
Rhode Island	X		X	
South Carolina				X
South Dakota				X
Tennessee		X		X
Texas				X
Utah				X
Vermont	X		X	
Virginia				X
Washington				X
West Virginia				X
Wisconsin		X		X
Wyoming				X

⁷ Governmental townships only.

⁸ Townships only.

CHAPTER 3. TRIBAL BLOCK GROUPS

Tribal block groups are statistical geographic subdivisions of a tribal census tract. The Census Bureau defines tribal block groups in cooperation with tribal officials to provide meaningful, relevant, and reliable data for small geographic areas within the boundaries of federally recognized AIRs and/or ORTLs. As such, they recognize the unique statistical data needs of federally recognized American Indian tribes. The delineation of tribal block groups allows for an unambiguous presentation of statistical data specific to the federally recognized AIR and/or ORTL without the imposition of state or county boundaries, which might artificially separate American Indian populations located within a single AIR and/or ORTL. To this end, the American Indian tribal participant may define tribal block groups that cross county or state boundaries, or both. For federally recognized American Indian tribes with AIRs and/or ORTLs that have fewer than 1,200 residents, the Census Bureau defines one tribal census tract and one tribal block group coextensive with the AIR and/or ORTL.

Tribal block groups submitted to the Census Bureau are subject to review to ensure compliance with the published criteria. Detailed criteria pertaining to tribal block groups exists in a separate *Federal Register* notice pertaining to all American Indian areas, including statistical areas defined through the PSAP. The *Federal Register* notices for both standard and tribal geographies are available on the PSAP website. [Appendix B](#) provides a summary of the statistical geographies criteria thresholds.

IMPORTANT: All tribal block groups must follow all of the final criteria and guidelines published for standard block groups, EXCEPT they do not have to nest within states or counties. They must instead nest within an individual AIR and/or ORTL, and must include unique identification to distinguish them from standard block groups.

The following criteria and guidelines apply for use in reviewing, updating, and delineating 2020 tribal block groups:

- Tribal block groups must not cross tribal census tract boundaries.
- Tribal block groups must cover the entire land and water area of the tribal census tract.
- Tribal block groups utilize capital letters “A” through “K,” with the exception of the letter “I,” and must be unique within tribal census tracts. Find more detail on tribal block group numbering in [Section 3.2](#).
- Tribal block groups must meet specific population and housing unit thresholds outlined in [Table 6: Tribal Block Group Thresholds](#).
- Tribal block groups must comprise a reasonably compact and contiguous land area and would only be noncontiguous in situations where the tribal census tract is noncontiguous.
- Tribal block group boundaries should follow visible and identifiable features.
- Block groups have three types, standard, tribal, and special use, for the 2020 Census. Refer to [Table 6: Tribal Block Group Thresholds](#) for the definition and associated criteria for tribal block groups. The other two types do not appear in the table since they are out of scope for this material.

The Census Bureau may modify and, if necessary, reject any proposals for tribal block groups that do not meet the published criteria. In addition, the Census Bureau reserves the right to modify the boundaries and attributes as needed to meet the published criteria. Modification may also occur to maintain geographic relationships before or after the final tabulation geography is set for the 2020 Census.

Table 6: Tribal Block Group Thresholds

	Description	Population Thresholds	Housing Unit Thresholds	Area Measurement Thresholds	Employment Threshold
Tribal Block Groups	Tribal block groups are divisions of tribal census tracts used for tabulating and publishing statistical data.	Min: 600 Max: 3,000	Min: 240 Max: 1,200	None	NA

3.1 Tribal Block Group Threshold Requirements

Tribal block groups have to meet certain population and housing unit thresholds as outlined above in **Table 6: Tribal Block Group Thresholds**. This helps ensure a minimum level of reliability in sample data and minimizes potential disclosures of sensitive information. Like tribal census tracts, the Census Bureau uses housing unit criterion to accommodate seasonably occupied areas that may have higher populations at times of the year other than on Census Day, April 1.

A tribal block group that exceeds maximum thresholds should be split; those that drop below the minimum thresholds should be merged with an adjacent tribal block group. If a participant chooses not to change threshold errant tribal block groups, they must provide justification for their retention. Tribal block groups may be completely redefined to meet population or housing thresholds; however, in doing so, please consider the impact on analysis of tribal block group level data across time.

In most cases, participants should use the 2010 Census population counts for tribal block group review. Locally produced population and housing unit estimates are permissible when reviewing and updating areas experiencing considerable growth since the 2010 Census.

The housing unit thresholds use the national average of 2.5 persons per household. Because of local and regional variations to this average, the Census Bureau will consider variation while reviewing all tribal block group revisions.

3.2 Tribal Block Group Codes and Identification

Tribal block groups begin with a single capital letter from “A” through “K,” excluding the letter “I.” These identifiers must be unique within each tribal census tract. Though tribal block group boundaries are census block boundaries, census blocks are numbered within standard, county-based block groups, not tribal block groups. There is no relationship between a tribal block group identifier and the census block numbers. For example, a tribal block group may contain census block numbers in a different “thousand” range (e.g., blocks 1001, 2011, and 3002), whereas all blocks in the 1000 range would be in standard block group 1 while all blocks in the 2000 range would be in standard block group 2.

3.3 Tribal Block Group Boundary Requirements

Like tribal census tracts, tribal block group boundaries generally follow permanent, visible features that are identifiable in the field. The following features are preferred as tribal block group boundaries:

- Tribal census tract boundaries must always be block group boundaries. This criterion takes precedence over all other criteria or requirements.
- Visible, perennial natural and cultural features, such as roads, shorelines, rivers, perennial streams and canals, railroad tracks, or aboveground high-tension power lines.
- Boundaries of legal and administrative entities in selected states. See [Table 5](#) for states with acceptable minor civil division and incorporated place boundaries.
- Alaska Native Regional Corporation boundaries in Alaska.
- Boundaries of large parks, forests, airports, penitentiaries/prisons, and or military installations if the boundaries are clearly visible.
- Some nonstandard visible features such as major ridgelines, aboveground pipelines, intermittent streams, or fence lines.
- Some nonstandard nonvisible features such as parcel boundaries, straight-line extensions and other lines-of-sight between acceptable visible features.

CHAPTER 4. CENSUS DESIGNATED PLACES (CDPS)

Census designated places (CDPs) are statistical geographic entities representing closely settled, unincorporated communities that are locally recognized and identified by name. They are the statistical equivalents of incorporated places, with the primary differences being the lack of both a legally defined boundary and an active, functioning governmental structure, chartered by the state and administered by elected officials. CDPs cannot be co-extensive with an entire AIR, ORTL, or any other AIA.⁹ CDP boundaries may extend beyond the boundaries of AIRs and/or ORTLs.

The Census Bureau published the 2020 Census PSAP CDP criteria in the *Federal Register*. It is available on the PSAP website and in [Appendix B](#). The following criteria apply to reviewing, updating, and delineating census designated places:

- CDPs constitute a single, named, closely settled center of population.
- CDPs generally consist of a contiguous cluster of census blocks comprising a single piece of territory with a mix of uses similar to that of an incorporated place of similar size.
- CDPs cannot be located, partially or entirely, within an incorporated place or another CDP.
- CDPs may cross county, AIR and/or ORTL boundaries, but must not cross state boundaries.
- CDPs have no minimum population or housing unit thresholds, but must contain some population, housing units, or both.
- CDP boundaries should follow visible features, except in circumstances where the boundary is coincident with the nonvisible boundary of a state, county, minor civil division, or incorporated place.
- CDP boundaries may follow other nonvisible features in instances where reliance upon visible features would result in over bounding of the CDP in order to include housing units on both sides of a road or street feature.
 - Such boundaries might include parcel boundaries and Public Land Survey System (PLSS) lines; fence lines; national, state, or local park boundaries; ridgelines; or drainage ditches.
- CDP names should be recognizable and used in daily communication by the residents of the community it represents.¹⁰
- CDP names cannot have the same name as an adjacent or nearby incorporated place.

In accordance with the final criteria, the Census Bureau may modify and, if necessary, reject any proposals for CDPs that do not meet the established criteria. In addition, the Census Bureau reserves the right to modify the boundaries and attributes of CDPs as needed to maintain geographic relationships before the final tabulation geography is set for the 2020 Census.

⁹ ANVSAs are an exception to this rule. The Tribal Paper Respondent Guide discusses the relationship of ANVSA and CDP statistical geographies.

¹⁰ There should be features in the landscape that use the name, such that a non-resident would have a general sense of the location or extent of the community; for example, signs indicating when one is entering the community; highway exit signs that use the name; or businesses, schools, or other buildings that make use of the name.

PART 2 INTRODUCING GUPS FOR 2020 CENSUS PSAP

This portion of the Respondent Guide includes detailed system requirement information necessary to use GUPS. It offers an introduction to GUPS and its menus, and toolbars. It provides specific instructions, through "Step - Action and *Result*" tables. In these tables, the Action is usually a command or action to perform and the *Result(s)* of the action are in *italics*. For example, if participants click the QGIS icon on the desktop, *the software should begin to run automatically*.

GUPS allows participants to review and modify the statistical geographies in a more efficient manner than previous decades. GUPS integrates the standardized PSAP requirements and thresholds that define statistical geographies to eliminate the guesswork for participants.

GUPS runs in both a desktop PC and a network environment. It runs in QGIS, which is an open source Geographic Information System (GIS), and contains all functionality required to make updates, executes automated checks for program criteria compliance, and creates standardized data output files for Census Bureau processing. Many of the menus and functionality are solely part of QGIS functionality and not applicable to GUPS for PSAP. For more information about the QGIS open-source platform, go to: <<http://www.qgis.org/en/site/>>.

The Census Bureau provides two DVDs to federally recognized tribal participants. One DVD includes the GUPS software and the other DVD, known as the "Data disc," includes shapefiles necessary for GUPS to operate, the Adobe .pdf files of the paper map materials, the Quick Reference materials, Respondent Guide(s), and the 2010 population and housing unit counts.

Participants can choose to navigate to the following website to download GUPS: <<https://www2.census.gov/geo/pvs/gups/>> or can install from the GUPS DVD. Once installed, the Census Bureau recommends using the "Census Web" choice within GUPS for accessing and loading in the necessary shapefiles into GUPS. Use of this functionality eases participant burden of installing directly from the DVD or from copying the data from the DVD to the local computer.

The next three chapters cover the following topics:

Chapter 5 System Requirements and Installation

- GUPS system requirements.
- GUPS installation instructions.

Chapter 6 Getting Started with GUPS

- Accessing the shapefiles for 2020 Census PSAP.
- Open GUPS and start a new project.
- Save a project.
- Open a previous project.

Chapter 7 GUPS Menus and Toolbars

- GUPS Page Layout.
- GUPS interface, including the Menu bar, various toolbars, Table of Contents, and the Map View.
- Instructions for using the tools available through the menu and toolbars.

CHAPTER 5. SYSTEM REQUIREMENTS AND INSTALLATION

5.1 System Requirements

Before beginning the installation, check the computer to verify it has the capabilities needed to run GUPS. [Table 7](#) lists the hardware and software requirements to install and run GUPS and the software requirements to submit files through the SWIM website.

Table 7: GUPS Hardware and Software Requirements

Hardware	Operating System	Browser
<p>Disk Space Needed to Run GUPS: 3.3 GB</p> <p>Disk Space Needed to Store Shapefiles: Shapefile sizes vary. To view the size of the shapefiles, right-click, and choose Properties in the drop-down menu. <i>The Files Properties box opens and displays the folder size.</i> Select multiple files/folders in the list to view their properties via the same method.</p> <p>RAM: 4 GB minimum, 8 GB or more recommended for optimal performance.</p>	<p>Windows: To run GUPS, Windows users need one of the following operating systems:</p> <ul style="list-style-type: none">• Windows 7• Windows 8• Windows 10 <p>Apple Mac OS X: Mac OS X users must secure a license for Microsoft Windows and use a Windows bridge. The suggested bridge software is Boot Camp, which comes pre-installed on all Mac computers. Locate instructions for using Boot Camp at: <https://www.apple.com/support/bootcamp/getstarted/>.</p> <p>IMPORTANT: Since Boot Camp requires a restart of the computer to set up the bridge, be sure to print the instructions provided at the URL above before beginning installation.</p>	<p>Minimum Browser Versions to Use SWIM:</p> <p>SWIM supports the two most recent version of each of the major browsers (Internet Explorer, Google Chrome, Mozilla Firefox, and Apple Safari).</p>

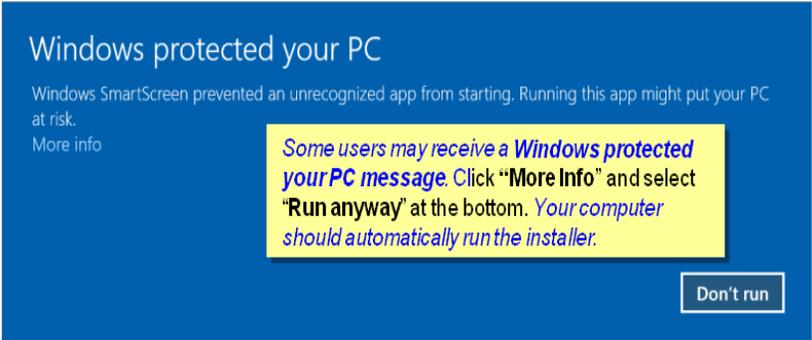
Depending on the Windows OS version, the GUPS dialog boxes may have a different appearance than the screenshots contained in the respondent guide, although the content is the same.

5.2 GUPS Installation

This section provides instructions for both methods, download and DVD, of GUPS installation. Administrator privileges may be required to install GUPS. Please ensure use of the version supplied for 2020 Census PSAP to conduct the review and update of tribal statistical geographies. To complete the installation, follow the steps in [Table 8](#).

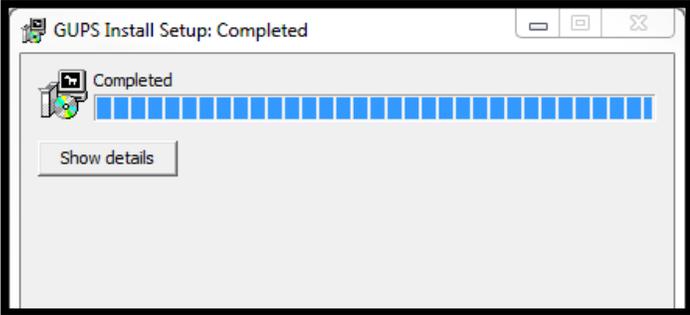
Note: To check for the latest version, navigate to the **GUPS** tab and click the **About GUPS** option in the drop-down menu to find the GUPS version number. If not running the latest version, download and follow the setup instructions that will automatically uninstall the old version before it installs the latest GUPS version.

Table 8: Installation of the GUPS Application

Step	Action and Result
<p>Step 1</p>	<p>Click the direct download link <https://www2.census.gov/geo/pvs/gups/> or place the installation DVD (GUPS disc) into the computer's DVD drive. <i>For some participants, a Windows protected your PC warning may appear.</i></p>  <p>To continue, click More info, and then select Run anyway?</p>
<p>Step 2</p>	<p>Other participants may receive an account control warning that asks, “Do you want to run this file?”, “Do you want to allow the following program from an unknown publisher to make changes to this computer?”, or a similar query. See an example below.</p>  <p>If received, click Run, Yes, Allow, or an option that allows GUPS to proceed. <i>The software should begin to run automatically.</i></p>
	<p>Be aware some participants may experience issues with installation because of administrative rights and privileges on their local computer systems. Work with the local Information Technology (IT) support staff to understand the settings that prevent the installation of external software prior to contacting the Census Bureau for assistance.</p>
<p>Step 3</p>	<p>If the software does not run automatically, open Windows Explorer, navigate to the CD/DVD drive where the GUPS disc is located, and double click on the file named Setup-9.0.x.bat. Please be aware, the name of this file may vary slightly, but it will be the only setup .bat file available. If the software still does not run properly, contact the local System Administrator for assistance locally. If they cannot resolve the installation problem, contact the GUPS help desk at 1-844-788-4921 or by email at geo.psap@census.gov.</p>

Step	Action and Result
<p>Step 4</p>	<p>When the installer opens, <i>the Welcome to the QGIS Setup Wizard screen appears.</i></p> <div data-bbox="521 260 1211 798" data-label="Image"> </div> <p>Note: The version needed for PSAP is QGIS 2.18.15 Las Palmas. If another version of QGIS exists on the computer, an instruction to uninstall appears prior to installing the Las Palmas version. Allow the uninstall process to complete or problems with GUPS may occur.</p> <p>Before proceeding, close all other open programs or applications. Once other programs and applications are closed, click the Next button.</p>
<p>Step 5</p>	<p><i>The License Agreement screen appears.</i></p> <div data-bbox="521 1083 1211 1621" data-label="Image"> </div> <p>Read the License Agreement and click the I Agree button to continue.</p>

Step	Action and Result
<p>Step 6</p>	<p>The Choose Install Location screen opens. To prevent potential installation errors, allow the software to install at the default location (usually C:\Program files\QGISGUPS).</p> <div data-bbox="511 294 1218 850" data-label="Image"> </div> <p>To begin the installation, click Next to continue.</p>
<p>Step 7</p>	<p>The Choose Components screen opens.</p> <div data-bbox="511 987 1218 1543" data-label="Image"> </div> <p>'<input checked="" type="checkbox"/>QGIS' in the Select components to install field is grayed out since it is the default. Click Install to continue.</p>
	<p>To review a previous screen or reread the license agreement, click the Back button (each screen contains this button).</p>

Step	Action and Result
<p>Step 8</p>	<p>The software should take between 5 and 10 minutes to install. When it finishes, the Completing the QGIS GUPS Setup Wizard screen opens.</p>  <p>Click the Finish button.</p>
<p>Step 9</p>	<p>After choosing Finish button from the previous menu, the GUPS Install Setup: Completed screen appears after showing the status of the installation.</p> 
<p>Step 10</p>	<p>To complete the installation, click the Close button at the bottom of the GUPS Install Setup: Completed Setup Wizard screen. Once the application installs, a QGIS icon appears on the desktop. In addition, the All Programs menu list within the Start Menu includes a folder for QGIS.</p>

CHAPTER 6. GETTING STARTED WITH GUPS

After successfully installing GUPS, there are three ways to retrieve shapefiles when starting a new project:

- Census Web (Recommended. Loads directly into GUPS).
- CD/DVD (i.e., the “Data disc”).
- My Computer (If downloaded contents of “Data disc” onto local hard drive).

Note: The next chapter, [Chapter 7 GUPS Menus and Toolbars](#), describes the menus, buttons, and toolbars referenced throughout this chapter.

6.1 Accessing the Shapefiles for 2020 Census PSAP

Regardless of the product preference selected during the invitation phase, the shapefiles necessary to conduct PSAP are available directly within the GUPS application. By choosing the “Census Web” option when selecting the geography initially in GUPS, participants with internet connectivity can load files as needed, or load multiple county files at once.

Note: The “Census Web” option is the recommended method for accessing the shapefiles for use in 2020 Census PSAP. Use of this option ensures the proper placement of the required files for the GUPS application to access.

Participants that do not have internet connectivity, or those that have slow, unreliable internet connectivity, can load the shapefiles directly into GUPS from the “Data disc” or from a location on their computer where they saved the “Data disc” contents. Instructions on how to load shapefiles are in [Table 9](#).

The GUPS application unzips the files and places them into a pre-established folder created on the computer’s home directory during the installation process (e.g., H:\GUPSGIS\gupsdata\...). It then displays them in the application. GUPS manages the files for the participant. No further action is necessary. Because of this GUPS functionality, participants must not make any changes to the shapefile or folder names. The files and folders must have the exact names as provided on the “Data disc” for GUPS to recognize and load them.

IMPORTANT: Census Bureau testing of the GUPS used for PSAP has shown that large entities may take from 15 – 35 minutes for GUPS to create and build the PSAP project. Please be patient while GUPS gathers all of the necessary files and calculates the population and housing unit information.

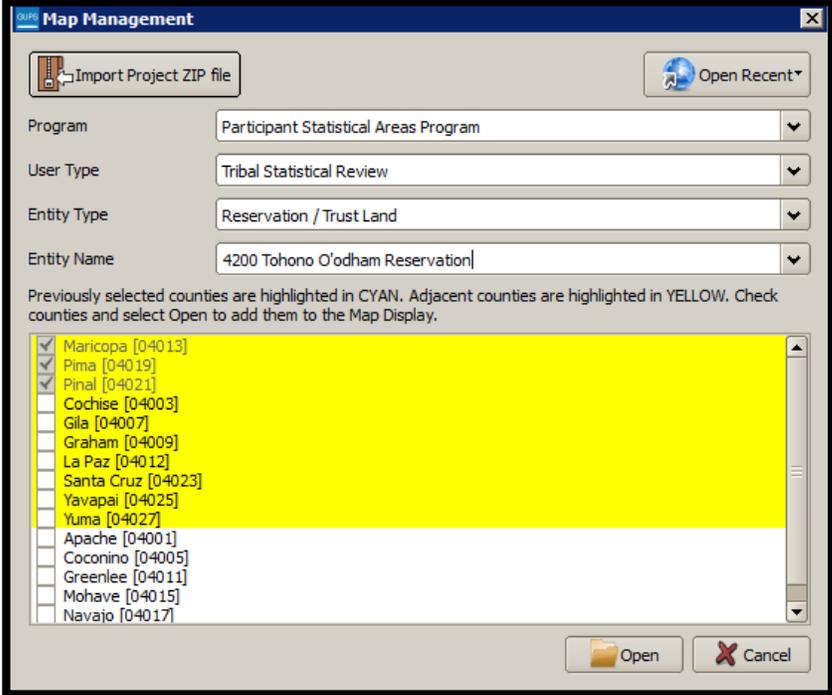
6.2 Open GUPS and Start a New Project

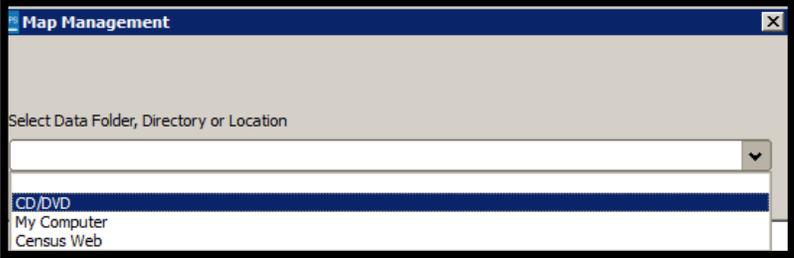
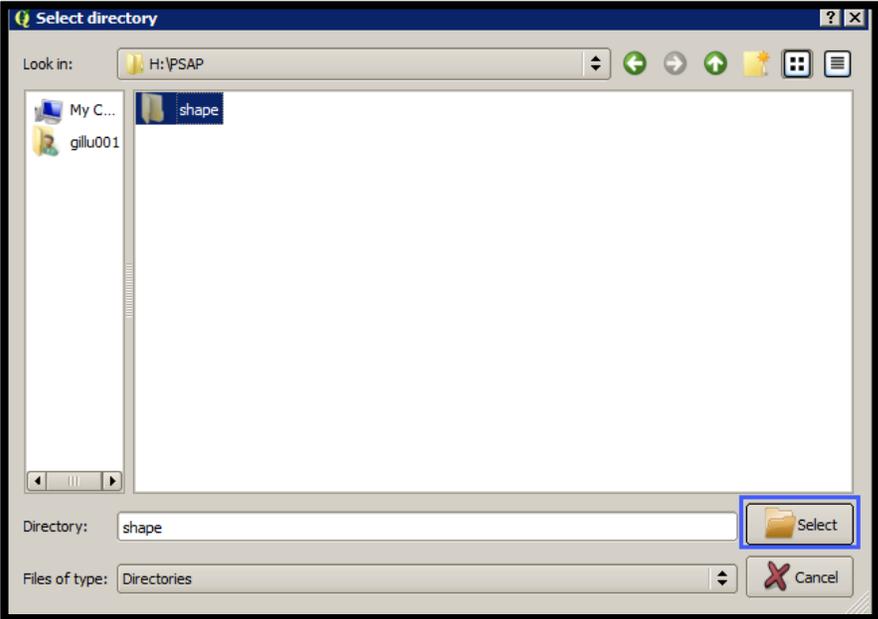
To open GUPS and begin the PSAP review, follow the steps in [Table 9](#) below. Before beginning, GUPS needs at least 3.3 gigabytes of free space on the hard drive to begin.

- To practice using GUPS without committing the changes, simply exit the system without saving. Before the system closes, it will provide the option to discard the changes.
- If comfortable with the GUPS, but completion of review and changes are not possible in one session, simply save the changes and close the system. Participants can reopen saved projects and continue working open GUPS later.

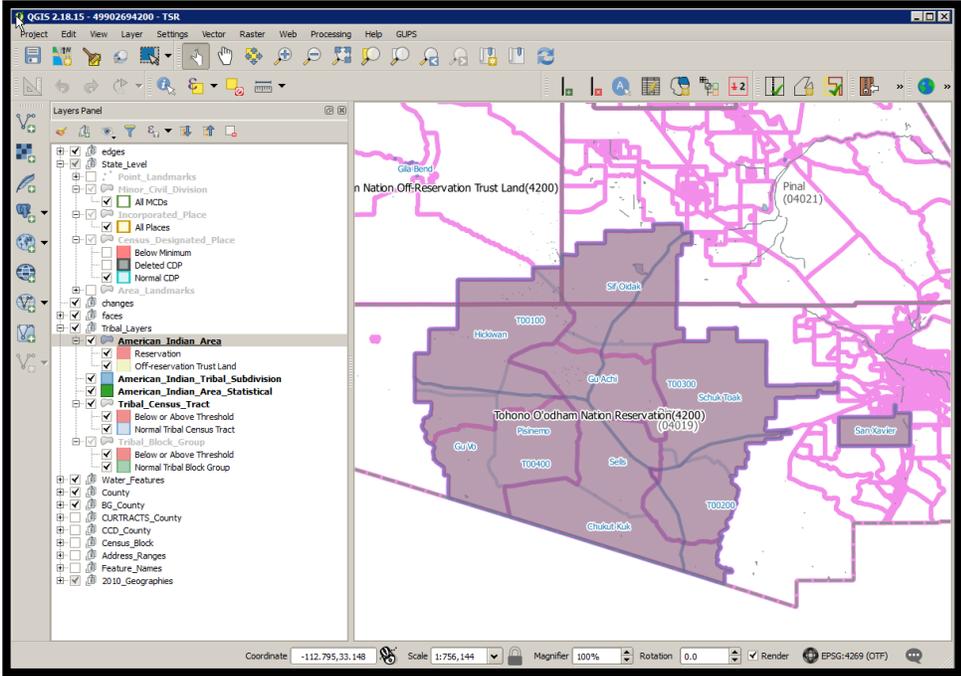
Table 9: Open GUPS and Start a New Project

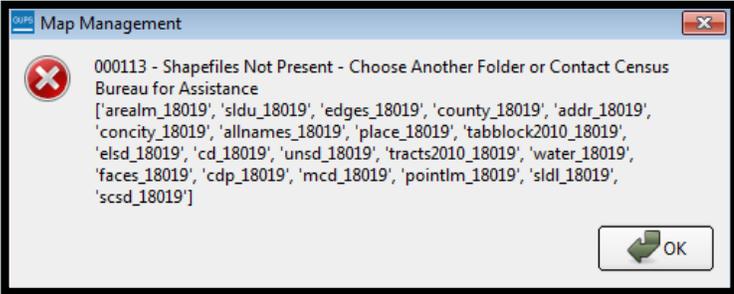
Step	Action and <i>Result</i>
Step 1	<p>Double click the QGIS icon on the desktop or navigate to QGIS from the Start Menu, All Programs choice and select the QGIS Desktop 2.18.15. <i>The QGIS splash screen appears.</i></p>  <p>The image shows the QGIS splash screen for version 2.18. The text 'QGIS 2.18' is prominently displayed in a large, white, sans-serif font. Below it, 'Las Palmas da G.C.' is written in a smaller, teal font. At the bottom, the text 'Setting up the GUI' is visible in a small font. The background of the splash screen is a grayscale topographic map of a mountainous region.</p>
Step 2	<p>Wait until the application loads (An older computer may require a few minutes). When the GUPS application has successfully loaded, <i>the main page opens, and the QGIS Tips! window appears.</i></p>  <p>The image shows a dialog box titled 'QGIS Tips!'. It features a green arrow icon pointing to the right. The main heading is 'Become an QGIS translator'. Below this, there is a paragraph of text: 'Would you like to see QGIS in your native language? We are looking for more translators and would appreciate your help! The translation process is fairly straight forward - instructions are available in the QGIS wiki translator's page.' At the bottom left, there is a checkbox with the text 'I've had enough tips, don't show this on start up any more!'. At the bottom right, there are three buttons: 'OK' (with a green arrow icon), 'Previous', and 'Next'.</p> <p>Since QGIS provided the open-source platform for building GUPS, participants may see references to QGIS in several locations within the GUPS application.</p>
	<p>To view QGIS system tips, click the Next button to read the first tip. Use the Previous and Next buttons to navigate within tips. To skip the tips, click the checkbox in the bottom left-hand corner that states, <i>“I've had enough tips, don't show this on start up any more!”</i></p>

Step	Action and Result
Step 3	<p>To begin a GUPS project, close the QGIS Tips! window by clicking the OK button. <i>The tip box closes and the Map Management dialog box opens, as shown below.</i></p> <ul style="list-style-type: none"> • Choose Participant Statistical Areas Program from the Program menu. • Choose Tribal Statistical Review from the User Type menu. • Choose Reservation / Trust Land from the Entity Type menu. • Choose the tribal entity from the Entity Name menu.  <p>At this point, the participant has not selected how to open these files, so <i>the window populates with all of the counties within the state</i>. The unchecked, highlighted counties are the counties adjacent to the tribal entity.</p> <p>Note: Only participants opening data using Census Web can load adjacent county into the Map View along with the tribal entity. This adjacent county functionality will not work for participants using the “Data disc” DVD. They do not have access to the universe of counties for the entire state. Participants can only update the tribal entity selected. It is not required to display the adjacent counties, but sometimes helpful in reviewing legal boundaries and CDP boundaries of those that cross county boundaries. For this review, participants do not need to load the adjacent counties and doing so likely causes GUPS performance to decrease.</p> <p>Click the Open button.</p>

Step	Action and Result
Step 4	<p>After selecting the tribal entity, GUPS asks to specify the location from which to pull the county's (or county equivalent's) shapefile. <i>The Select Data Folder, Directory or Location dialog box opens.</i></p>  <p>In the Select Data Folder, Directory or Location dialog box drop-down menu, select the location from which to pull the tribal entity file. This example assumes the participant is pulling the data from the CD/DVD in the drop-down menu. To download data directly into GUPS from the Census Bureau, choose Census Web (recommended) or directly from the local hard drive, choose My Computer (least recommended option).</p>
	<p>GUPS only asks to specify a location of the data the first time a participant opens a tribal entity's shapefile. When returning to work, the shapefile automatically loads, even if there were no changes in the first session.</p>
Step 5	<p>From the Select directory window, navigate to the location of the CD/DVD, click the shape folder to populate the Directory field, and then click Select.</p>  <p>IMPORTANT: Participants must select the directory and not specific files within the directory.</p>

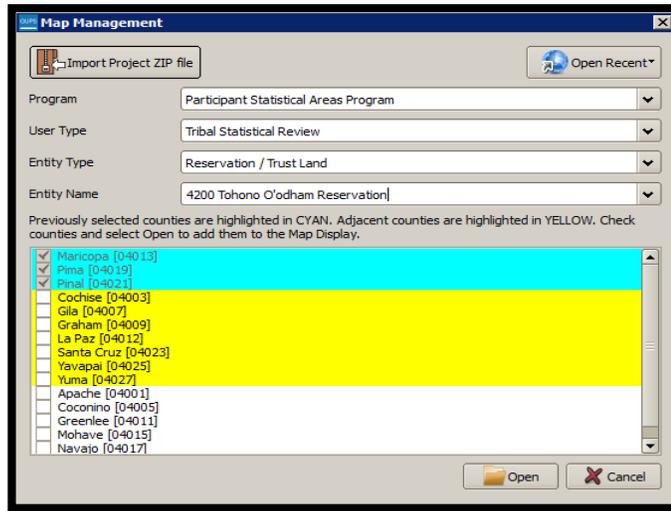
Step	Action and Result
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Step 6	<p>GUPS downloads all the shapefiles necessary for PSAP off the DVD and opens the requested tribal entity project. <i>GUPS displays a Map Management window that shows the progress of building the project and calculates the population and housing units. Progress displays by a blue status bar with the percentage of download completed shown to the right of the status bar.</i></p> <p>Please be patient. Based on the size of the tribal entity, it might take some time to download the data and appear on the screen. Once downloaded, <i>the tribal entity appears in the Map View and layers are visible within the Table of Contents.</i></p> 
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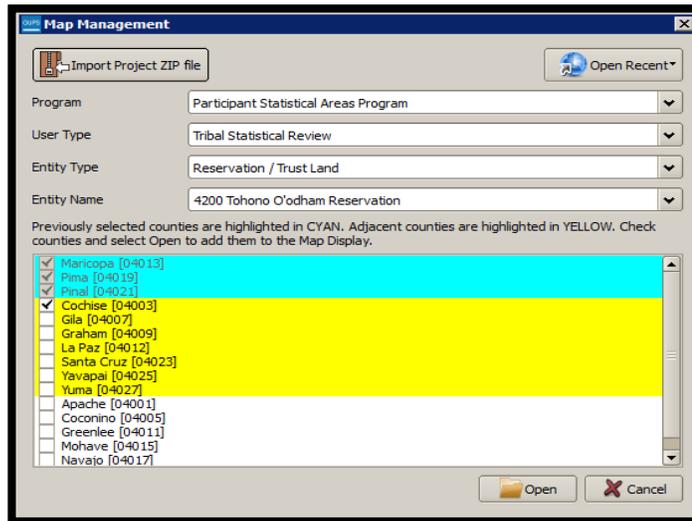
	<p>If the shapefiles are missing from the directory location chosen in the Select Data Folder, Directory or Location window drop-down menu, or the files are corrupted and cannot be loaded, <i>the following error message appears.</i> Close GUPS and start the process again.</p> 
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Step 7

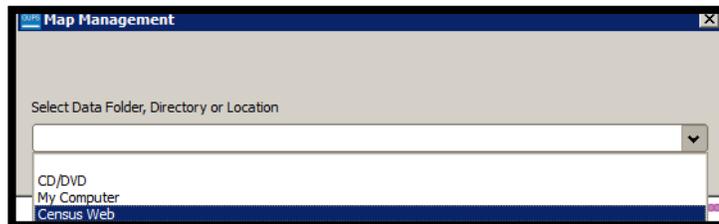
As mentioned in **Step 3** of this table, participants using the **Census Web** option can add the adjacent counties of the tribal entity by clicking the **Map Management** button in the **Standard toolbar**. *The Map Management window displays the counties associated with the tribal entity selected from the previous steps in blue highlight. Adjacent counties highlight in yellow in the Map Management window.*



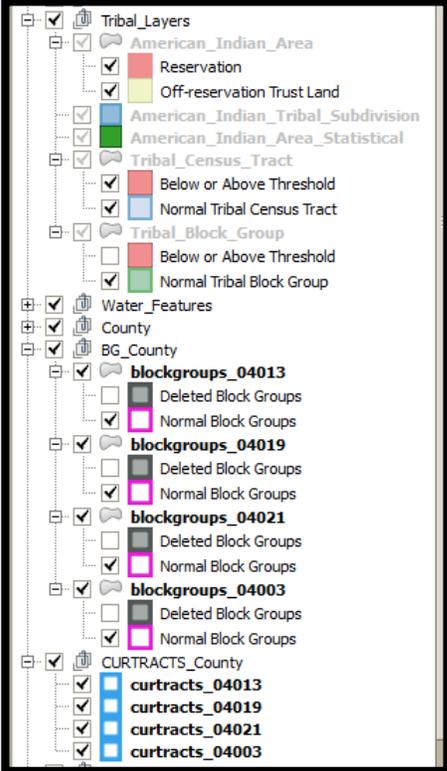
Click the boxes to the left of the highlighted counties list to select adjacent counties to download. *All counties with a checkmark will download and display in the **Map View**.* Unchecking a county excludes that county from the project. **Note:** Loading adjacent counties likely slows GUPS performance.



Click **Open**. From the subsequent **Map Management** window, choose **Census Web**.



*GUPS downloads all the selected adjacent counties layers and places them in the **Table of Contents** within existing Tribal Layers.*

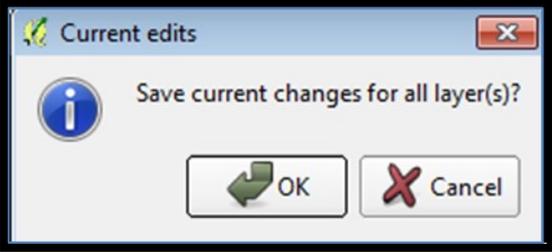
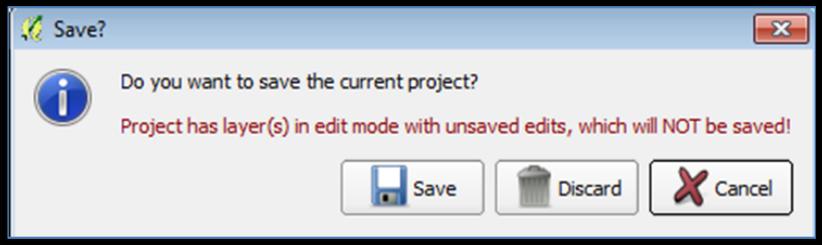
Step	Action and Result
Step 8	<p>To view the newly added adjacent county, expand the existing non-tribal layers to activate and display the chosen layer in the Map View. For this example, the BG_County and CURTRACTS_County layers are expanded to show those respective layers for Cochise (04003).</p> <p>It is important to note that the adjacent county is not part of the tribal layer because it does not contain tribal geographies for the specific tribal entity. For this reason, the standard geographies and county features are loaded into GUPS.</p> 
	<p>The limit for loading counties at once is 11. To load shapefiles for additional counties, after the first 10 are loaded:</p> <ol style="list-style-type: none"> 1. Leave the same tribal entity selected in the Entity Name field. 2. Uncheck the already loaded counties for the tribal entity in the Map Management dialog box list. 3. Check the checkboxes for the additional counties (up to 10) to add. 4. Click the Open button and after the Select Data Folder, Directory or Location box opens, use the drop-down menu to select the source of the files. <p>Repeat this process as many times as needed. This is not recommended as the stability of GUPS may be compromised.</p>

6.3 Save a Project in GUPS

To save any PSAP updates, follow the steps in [Table 10](#). Make sure to save the project prior to exiting GUPS.

Note: The Census Bureau recommends saving often, but only after ensuring the changes are accurate. Participants cannot perform the **Undo** action discussed in [Table 13](#) and in [Table 18](#) on a change after performing a save action.

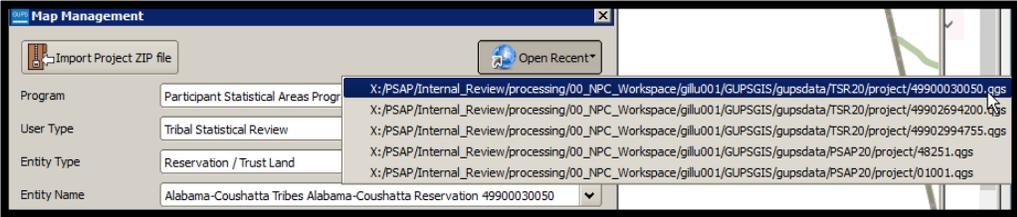
Table 10: Save a GUPS Project

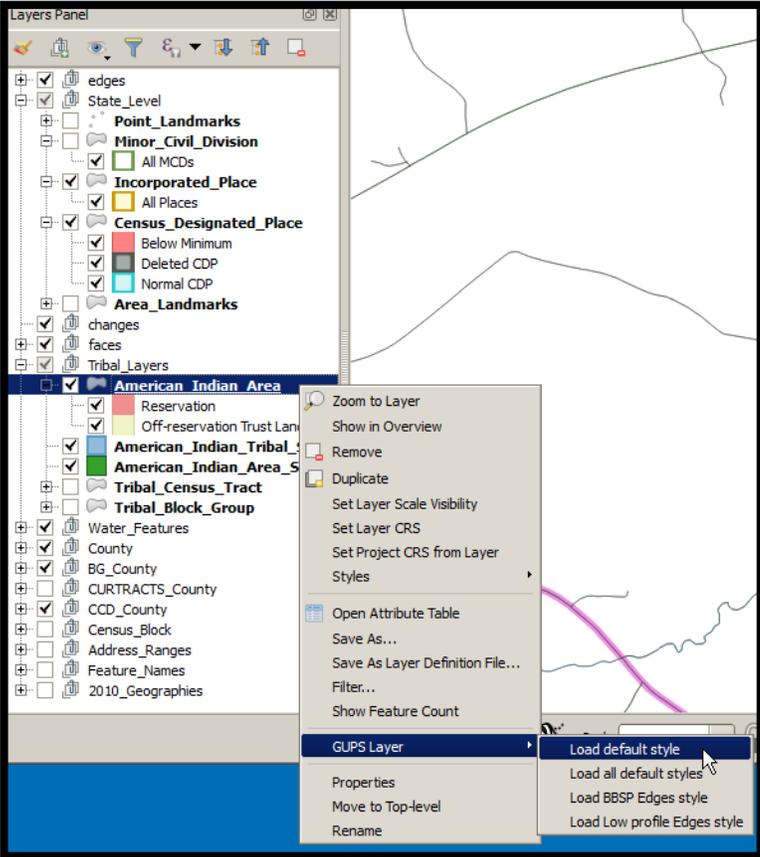
Step	Action and Result
<p>Step 1</p>	<p>After working on a project, be sure to Save before exiting. Otherwise, edits will be lost. To save, participants select Project from the main menu and Save from the drop-down menu or click the Save button on the Standard toolbar (as shown below).</p>  <p>Both choices result in the prompting of the Current edits confirmation dialog box.</p>  <p>Click OK to save or Cancel to return to the Map View without saving.</p>
	<p>To exclude changes, close the application (click the red X in the upper right-hand corner of the main GUPS page). A Save? dialog box asking to save, discard, or cancel appears.</p>  <p>Click Discard to close the application without saving the project.</p>

6.4 Open a Previous Project in GUPS

To open a previously saved PSAP project, follow the steps in [Table 11](#) below.

Table 11: Open a Previous Project in GUPS

Step	Action and Result
<p>Step 1</p>	<p>To open a previously saved project, in the Map Management dialog box, click the down arrow next to the Open Recent button. <i>The drop-down menu opens with one or more project(s) listed.</i> If the dialog box does not appear after opening GUPS, click the Map Management button in the Standard toolbar to open the dialog box shown below.</p>  <p>Note: If the computer is shared, then the potential exists for multiple projects to appear in the Open Recent list. To identify the proper project file, review the number string. This string comprises the 11-digit tribal code that the Census Bureau uses to identify each tribal entity.</p>

Step	Action and Result
Step 2	Select the correct project file from the Open Recent list. <i>The map for the project automatically loads and the layers show in the Table of Contents.</i>
	<p>Census Bureau-defined default layers and view settings are loaded with each new project in GUPS. Changing and saving these settings for a project also saves any new settings. Thus, when reopening the project, the Table of Contents and Map View display the layers and the map according to the settings last used rather than returning to the Census Bureau default settings. To restore the default settings for a layer, right-click the layer in the Table of Contents. <i>A drop-down menu opens.</i> In the drop-down menu, select GUPS Layer. <i>A sub-menu opens.</i> In the sub-menu, select Load default style (see illustration below).</p>  <p>To reset the default settings for all layers, select the second choice Load all default style.</p>

Step	Action and Result
<p>Step 3</p>	<p>When reopening a previously saved project, note that <i>any previously selected counties highlight in cyan blue and remain checked. Adjacent counties, not previously selected, highlight in yellow.</i></p> <div data-bbox="479 275 1271 940" data-label="Image"> </div> <p>Previously selected counties are highlighted in CYAN. Adjacent counties are highlighted in YELLOW. Check counties and select Open to add them to the Map Display.</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Maricopa [04013] <input checked="" type="checkbox"/> Pima [04019] <input checked="" type="checkbox"/> Pinal [04021] <input type="checkbox"/> Cochise [04003] <input type="checkbox"/> Gila [04007] <input type="checkbox"/> Graham [04009] <input type="checkbox"/> La Paz [04012] <input type="checkbox"/> Santa Cruz [04023] <input type="checkbox"/> Yavapai [04025] <input type="checkbox"/> Yuma [04027] <input type="checkbox"/> Apache [04001] <input type="checkbox"/> Coconino [04005] <input type="checkbox"/> Greenlee [04011] <input type="checkbox"/> Mohave [04015] <input type="checkbox"/> Navajo [04017]

Participants may check and load additional adjacent counties at this point if they use **Census Web**. Participants working from DVD are not able to load adjacent counties.

CHAPTER 7. GUPS MENUS AND TOOLBARS

With the basics of GUPS outlined in [Chapter 6 Getting Started with GUPS](#), this chapter serves to introduce and provide specific details of the various GUPS menus and toolbars available for use during PSAP.

7.1 GUPS Page Layout

The image below illustrates the GUPS page layout. The blue and white text boxes provide labels for the page components including the Menu and Toolbars, the Map View, the Table of Contents (labeled in GUPS as “Layers Panel”), and the Status Bar.

Note: To simplify the initial view, the Census Bureau recommends disabling, or unchecking, the “BG_County” and “CCD_County” layers if they are present in the project. Participants can enable these layers after they become familiar with GUPS and its layer symbology.

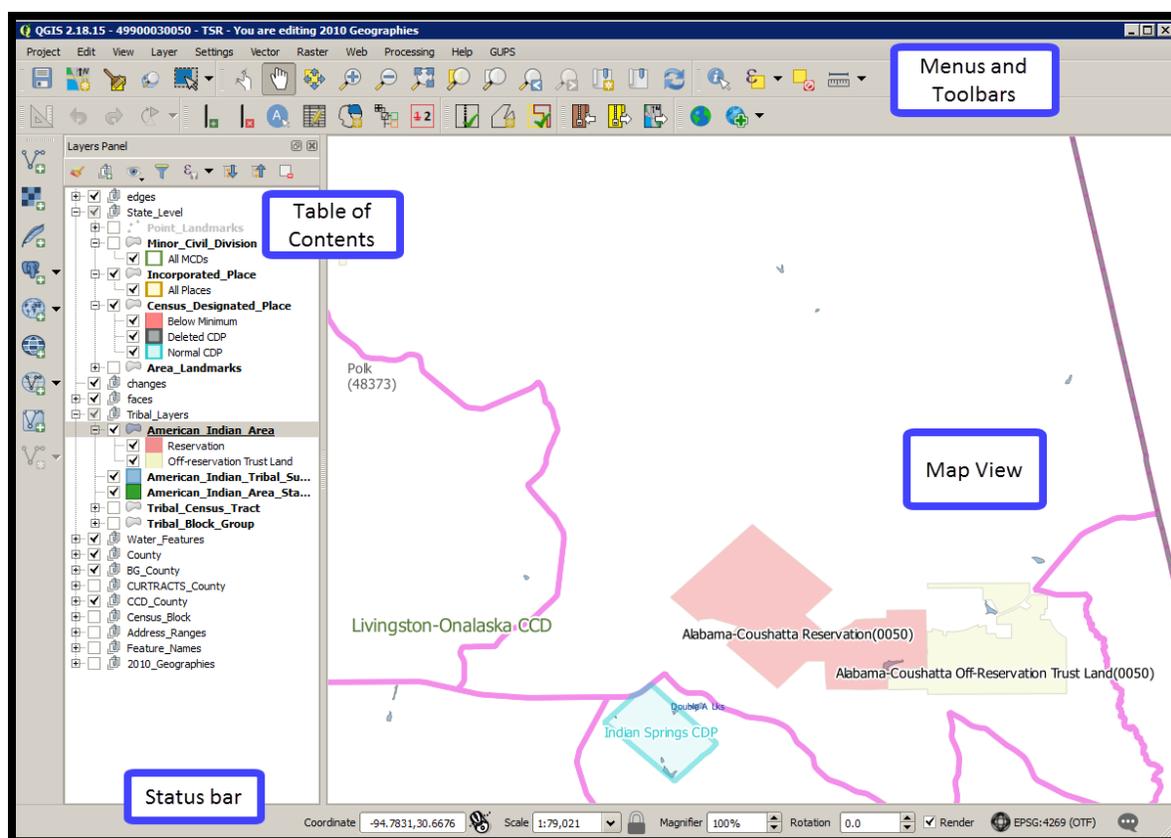
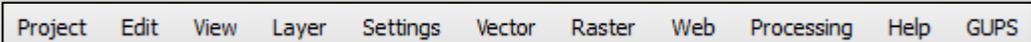


Figure 3. GUPS Page Layout

[Table 12](#) explains the purpose for each element on the main GUPS page. [Section 7.2](#) details the individual components and specific functions of each element.

Table 12: GUPS Main Page Elements

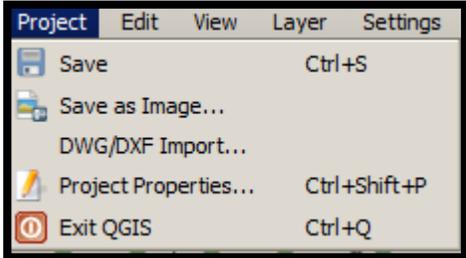
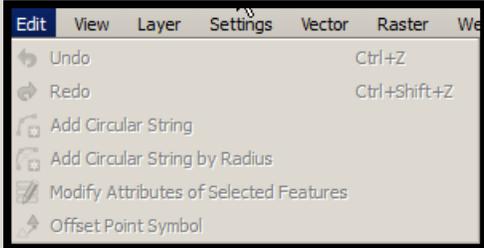
Page Element	General Function
Map View	<p>The Map View displays the default data layers for the PSAP. GUPS automatically loads the layers based on the program selected in Map Management. The Map View reflects symbology updates (i.e. turn layers on/off, zoom or pan) as participants make those adjustments.</p>
Menu bar	<p>The Menu bar allows access to QGIS and some GUPS features using a standard hierarchical menu. It offers basic features such as Settings and Help; tools to manage the Map View and import user-provided data; important calculation, measurement, and geoprocessing tools; and tools needed to make shapefile updates. Almost all of the functions available from the Menu bar are also available in the application’s conveniently located toolbars.</p> 
Standard toolbar	<p>The Standard toolbar provides navigation tools and other tools needed to interact with the Map View and layers’ attribute tables, and data query and editing tools.</p> 
PSAP toolbar	<p>The PSAP toolbar provides software functions and the specific tools needed to make PSAP updates, view linear feature attributes, review and validate changes, import and export zipped files and print in support of PSAP.</p> 
Manage Layers toolbar	<p>The Manage Layers toolbar offers tools to import participants own data. They may superimpose map layers in GUPS to compare the features on their own maps with those on the Census shapefiles. QGIS is the source of these tools, not GUPS. Refer to the QGIS documentation for detailed definitions on their use.</p> <p>Although shown horizontally here, this toolbar may appear aligned vertically to the left of the Table of Contents in the GUPS application. Reposition it accordingly to meet your needs.</p> 
Table of Contents toolbar	<p>The Table of Contents toolbar shows the layers on the map for the tribal entity selected. The Table of Contents toolbar, positioned at the top of the Table of Contents, beneath the Layer Panel, allows participants to add or remove layers (or groups), manage layer visibility, and filter the legend by map content.</p> 

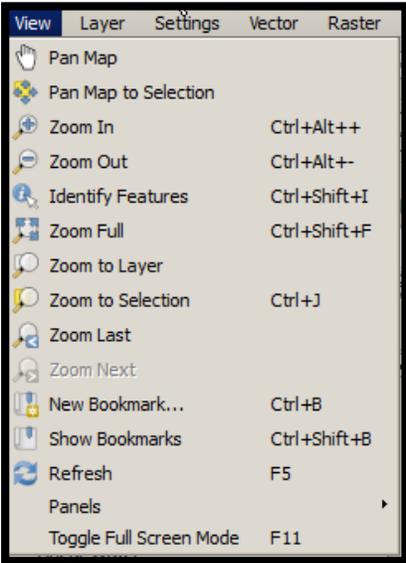
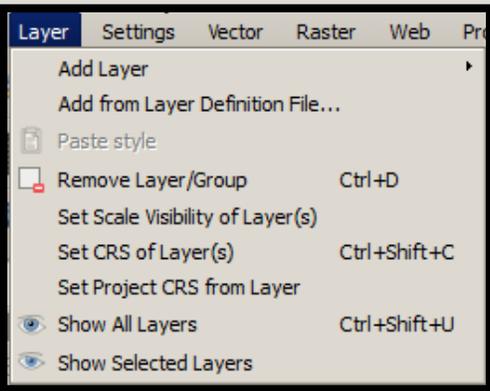
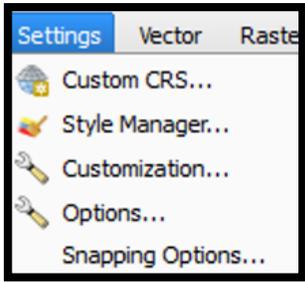
Page Element	General Function
Status bar	<p>The Status bar displays information on the coordinates, map scale, magnification, rotation, and projection and allows for the adjustment of the display.</p> 

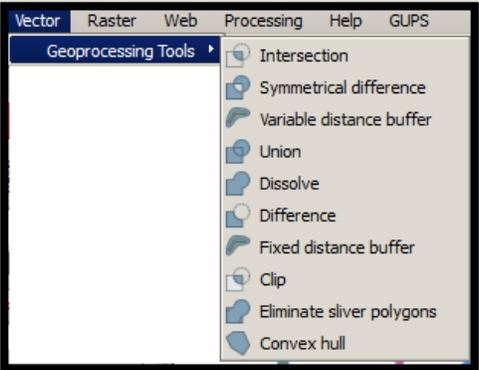
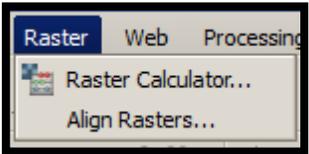
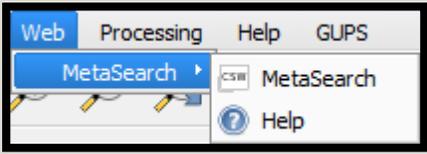
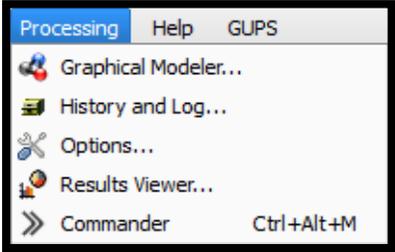
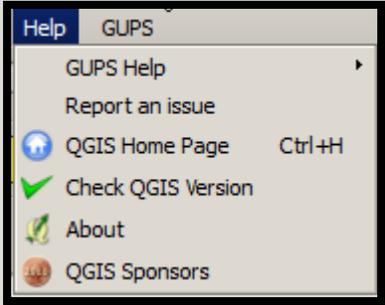
7.2 Menu Bar

The **Menu bar** includes top-level, drop-down menus and allows navigation through GUPS using a standard hierarchical menu. Most relate to QGIS functionality and not GUPS functionality. Refer to the QGIS documentation, cited in [Part 2](#), for details on the menu and sub-menu functionality. [Table 13](#) provides a glimpse into the menu bar and its sub-menus.

Table 13: Menu Bar Tabs, Drop-down Menus, and Functions/Descriptions

Tab	Drop-down Menu	Function/Description
Project		<p>The Project tab allows participants to save changes to the project layers, create image files, import AutoCAD files, display project properties, and exit the GUPS application.</p>
Edit		<p>The Edit tab allows participants to undo or redo vector-editing operations. The Undo and Redo actions are dockable widgets. They activate in the Edit menu and display with orange or green icons on the Advanced Digitizing toolbar when a split, merge, and boundary change action occurs.</p> <p>IMPORTANT: Click on the edited layer (e.g., curtracts_STCOU) to make it active before performing undo or redo action. Click the Undo button to cancel an action or the Redo button to redo a recently canceled action. Use these tools before saving the change to the layer; otherwise, if the participant saves the changes after an action then the Undo and Redo functionality deactivates and the associated icons gray-out.</p> <p>Note: There is no PSAP use for the Add Circular String or Add Circular String Radius functions. These icons remain inactive in this menu.</p>

Tab	Drop-down Menu	Function/Description
View		<p>The View tab duplicates several actions available on the Standard toolbar. Included are options for navigating the map, identifying feature attributes, measuring distance, and creating spatial bookmarks to return to the same Map View later. Refresh restores the map to its original map extent. Panels changes the layer order, browses to a location on the computer to add additional layers, opens the processing toolbox, and more. If not visible or closed earlier, click Panels in the drop-down menu, then click the right arrow, and click Layers in the Layers drop-down-menu to restore the Table of Contents. The Toggle Full Screen Mode expands GUPS to fill the entire screen. Selecting it again, removes the full screen mode.</p>
Layer		<p>The Layer tab adds and removes layers from the map, opens the layer attribute table, sets the map projection or Coordinate Reference System (CRS), displays or hides layers.</p> <p>Note: Many of these same functions are located on the Manage Layers toolbar and the small toolbar at the top of the Table of Contents. Some of these actions are available from the Table of Contents toolbar.</p>
Settings		<p>The Settings tab allows participants to customize the CRS and map display options and set snapping tolerances (see instructions below this table).</p> <p>Note: Snapping tolerances in GUPS are pre-defined by layer (e.g., the default tolerance for edges is set to 15 pixels). When making corrections, participants may want to adjust the snapping tolerances for a layer or layers within this same menu. Locate the definition of edges in Appendix A.</p>

Tab	Drop-down Menu	Function/Description
Vector		<p>The Vector tab provides access to several tools that aid in the creation of buffers around features; overlay areas to create an intersection, union, or symmetrical difference; merge features; and perform other common geoprocessing actions.</p>
Raster		<p>The Raster tab provides access to a Raster Calculator that allows for the calculation of existing raster pixel values. The results of which are written to a new raster layer with a GDAL-supported format. The Align Rasters tool is able to ingest several rasters as input and align them perfectly by performing several actions including reprojection, resampling, clipping, and rescaling. It saves all rasters to a separate file. These tools are QGIS based and not used for PSAP work in GUPS.</p>
Web		<p>The Web tab provides access to MetaSearch, an easy and intuitive approach and user-friendly interface to searching metadata catalogues within QGIS.</p>
Processing		<p>The Processing tab includes several tools; however, these are not required for Census Bureau geographic program participation. The sub-menus pertain to algorithms, creating models, viewing the results of algorithms executed, and history.</p>
Help		<p>The Help tab provides tools for understanding QGIS (the open-source platform on which GUPS was developed), the GUPS application itself and allows participants to report an issue with the software. The GUPS Help sub-menu, routes participants to the PSAP website.</p>

Tab	Drop-down Menu	Function/Description
GUPS		<p>The GUPS tab provides quick access to the key tools also available on the Standard toolbar and PSAP toolbar, including those needed to manage maps.</p> <p>Click the About GUPS option in the drop-down menu to find the GUPS version number. Callers to technical support need to provide this number.</p>

7.3 Map View and Table of Contents

GUPS automatically loads a set of default data layers (and default layer groups) defined by the Census Bureau for the program and geography selected in the **Map Management** dialog box. As the map opens in the **Map View**, the list of the preset layers (already grouped) appears in the **Table of Contents**.

Note: Participants may also see the **Table of Contents** labeled as the **Layer Panel** within GUPS. The two are synonymous and reflect what others often call a Legend.

Participants use the **Table of Contents** and the **Table of Contents toolbar** to manage the **Map View**. These two windows are interdependent. Selections made in the **Table of Contents** reflect immediately in the **Map View**.

To close the **Table of Contents**, click the small 'x' in the upper right corner of the Layer Panel. To restore the **Table of Contents**, click the **View** tab on the **Menu bar**, select **Panels** in the drop-down menu, click the arrow next to Panel to open the sub-menu, and click **Layers Panel**. Toggling the Layer Panel on and off may be helpful for providing a larger **Map View** window.

7.3.1 Table of Contents Toolbar

Using the buttons on the toolbar located at the top of the **Table of Contents**, participants can add and remove layers or groups, manage layer visibility, filter the legend by map content, expand or condense all sections of the **Table of Contents** list at once, and group layers.



Figure 4. Table of Contents Toolbar

The **Table of Contents toolbar** contains the items shown above in [Figure 4](#) with descriptions provided below in [Table 14](#).

Table 14: Table of Contents Toolbar Buttons, Names, and Functions/Descriptions

Button	Name	Function/Description
	Open the Layer Styling Dock	Click the Open the Layer Styling Dock button to toggle the layer styling panel on and off.

Button	Name	Function/Description
	Add Group	Click the Add Group button to organize layers in the Table of Contents into groups.
	Manage Layer Visibility	Click the Manage Layer Visibility button to preset views in the Table of Contents .
	Filter Legend by Map Content	Click the Filter Legend by Map Content button to remove layers from the Table of Contents that are not currently in the Map View extent. This feature ensures that the Table of Contents does not contain entries for items not currently in the Map View .
	Filter Legend by Expression	Click the Filter Legend by Expression button to remove features from the selected layer tree style that have no features satisfying the condition. Used to highlight features within a given area/feature of another layer. Drop-down list allows participants to edit or clear the expression set.
	Expand All	Click the Expand All button to expand the Table of Contents menus (+) to display all layers under each group's menu.
	Collapse All	Click the Collapse All button to collapses the Table of Contents menus (-) to show only groups.
	Remove Layer/Group	Click the Remove Layer/Groups button to remove a layer or group from the Table of Contents .

7.3.2 Managing the Map View from the Table of Contents

Within the **Table of Contents**, participants can manage layer visibility (i.e., determine what layers display on the map), reorder data layers, expand and condense the layers/layer groups, add labels to layers, and change the layer scale visibility. The following five sub-sections explain these topics. Though not recommended for the pre-loaded layers, participants can also set new layer symbology within the **Layer Properties, Style menu**. This section does not detail this process, but [Figure 10](#) depicts the menu.

7.3.2.1 Manage Layer Visibility

To add or remove layers from the **Map View**, click the checkbox next to a layer to add it to the **Map View** as shown in [Figure 5](#). Uncheck the checkbox next to a layer to remove it from the **Map View** as shown in [Figure 6](#). Both illustrate the manipulation of the “edges” layer.

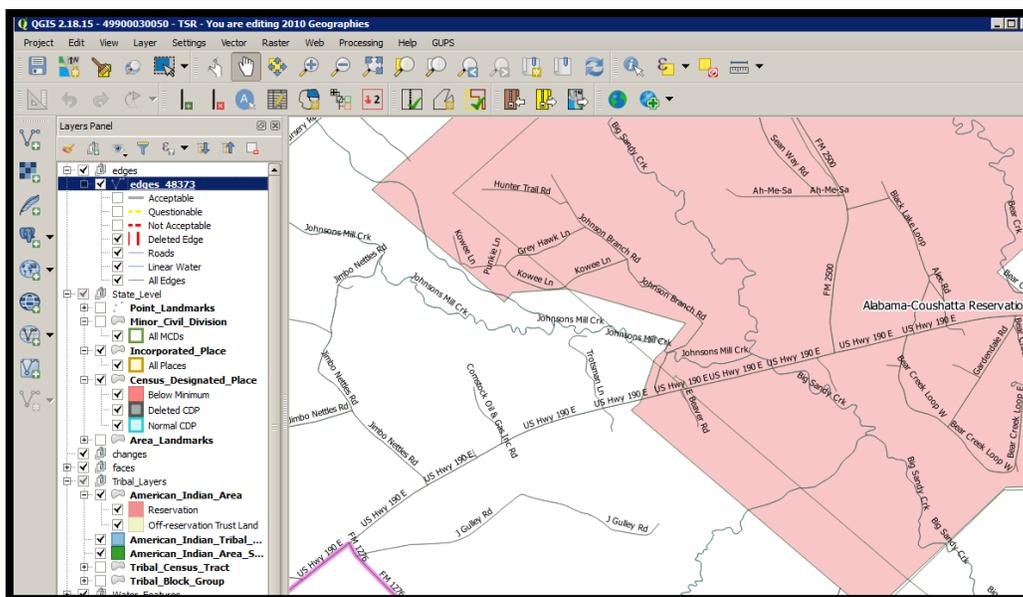


Figure 5. Check a Checkbox to Add a Layer

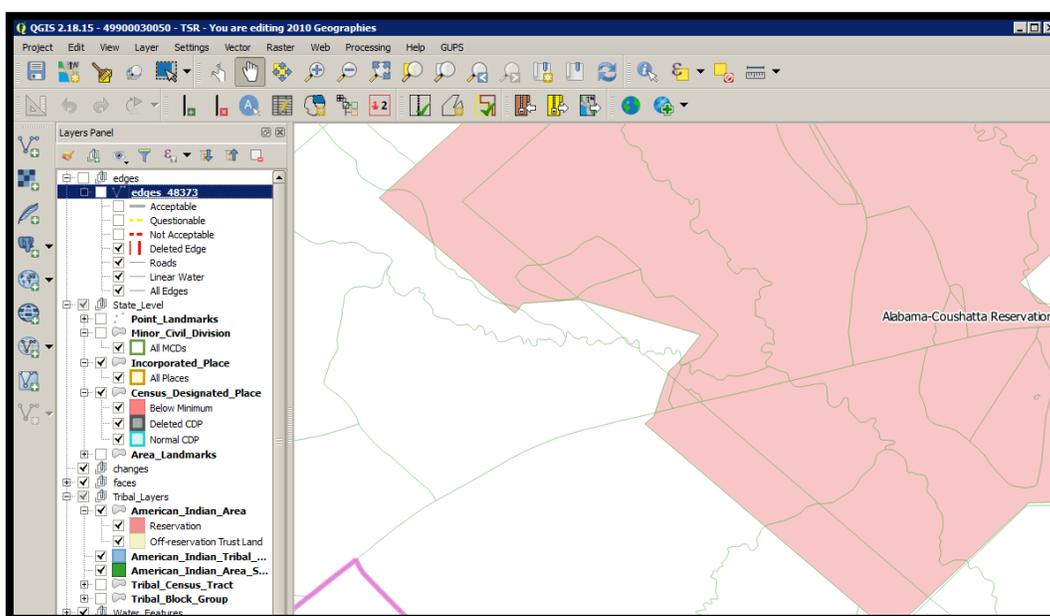


Figure 6. Uncheck a Checkbox to Remove a Layer

Participants can also right-click the name of the layer and select **Remove** in the drop-down menu, as shown in [Figure 7](#), to remove the entire layer from the project. Though shown for this example to illustrate the presence of the button, the GUPS PSAP project includes all layers necessary to conduct a review and update. Please use the checkbox to manage the visibility of any preloaded layers rather than removing them from the project. The **Remove** action may be helpful for removing external data added by the PSAP participant.

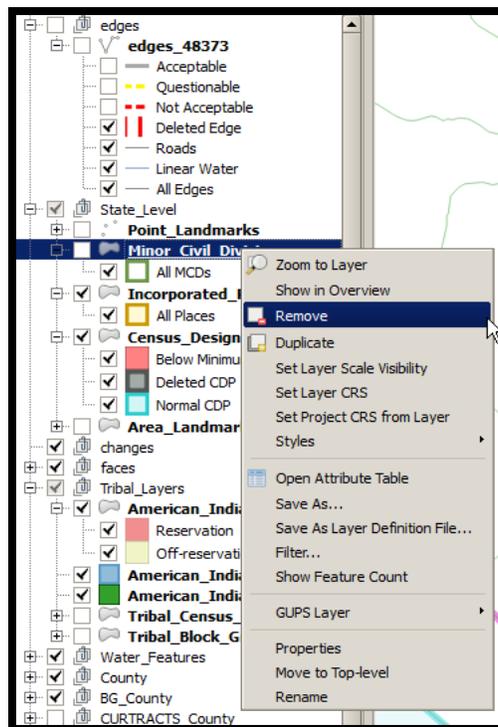


Figure 7. Highlight Layer and Right Click to Remove

7.3.2.2 Reorder Data Layers

In the **Table of Contents**, the layer order determines how the layers display on the map. The top layers display on top of those below them. To change the display order:

- Left-click on the layer name.
- Hold down the mouse button and drag the layer to the desired position in the list.
- Release the mouse button to place the layer in its new position. The map display reflects the new layer order in the **Table of Contents**.

7.3.2.3 Expand/Condense Layers or Layer Groups

To expand or contract the menu for a layer or layer group, click on the '+' sign to expand the group and, once expanded, click the '-' sign to condense the group. These individual functions allow for a more specific management of layers than the **Expand All/Collapse All** buttons on the **Table of Contents** toolbar.

7.3.2.4 Add Labels to Layers

Participants may notice that many of the standard geographies layers (e.g., census tracts and block groups specifically) are labeled as part of the creating the project in GUPS. Other layers do not automatically label. This section informs participants how to label the edges layer.

From the **Table of Contents**, right-click the name of the layer and select **Properties** in the drop-down menu, as shown in [Figure 8](#) and left-click to open the layer properties window. This opens the **Layer Properties** window shown in [Figure 9](#).

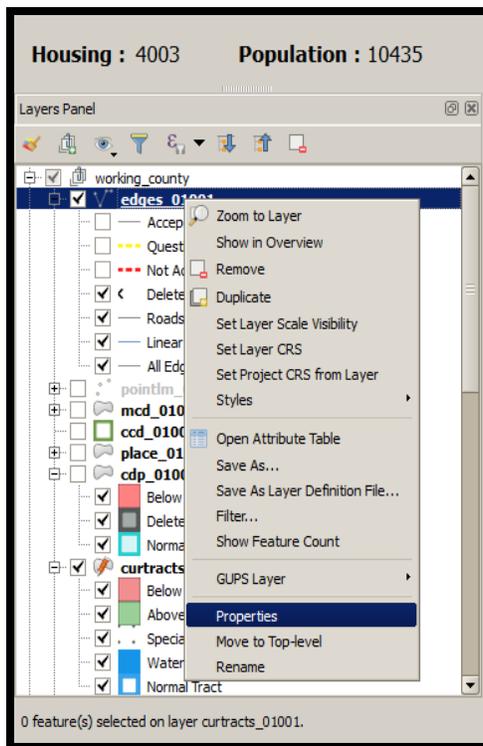


Figure 8. Layer Properties Menu

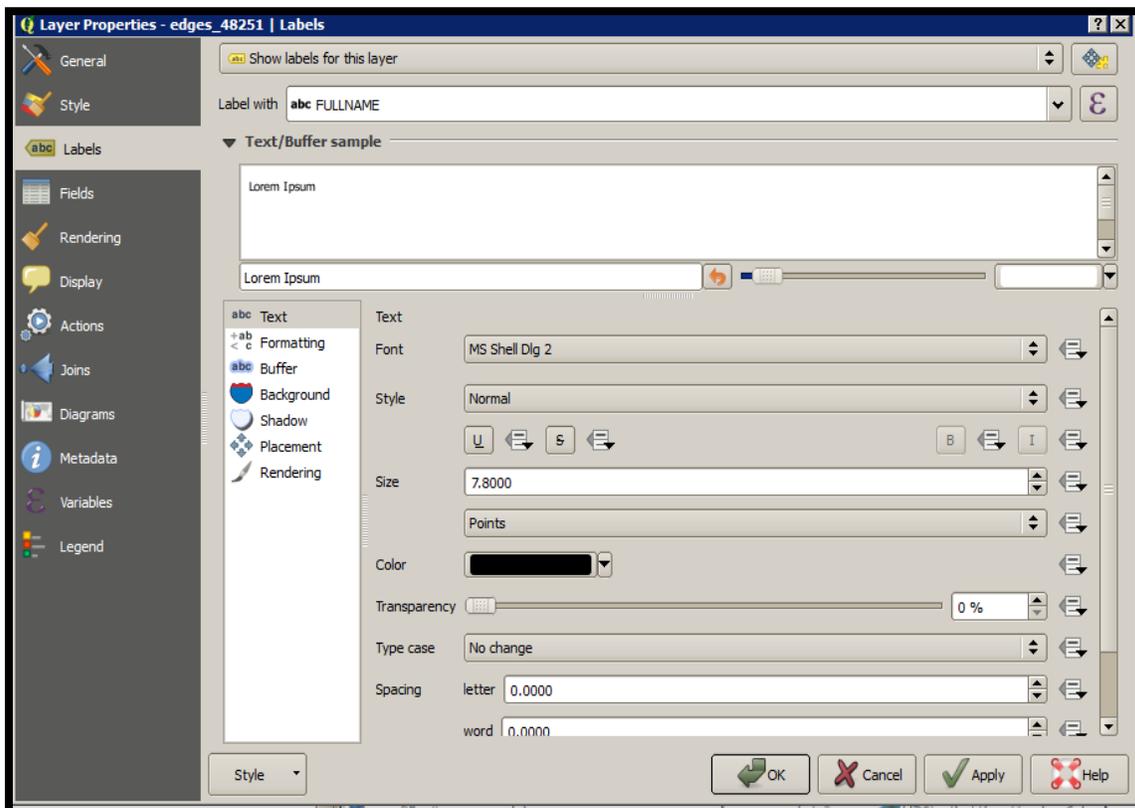


Figure 9. Layer Properties Window - Labels Menu

Click the **Labels menu** on the left side of the window. Choose **Show labels** for this layer from the drop-down menu along the top of the window. From the **Label with section**, select the field to use for labeling the layer's features. In this example, choose **FULLNAME**. Participants can customize the labels Font, Style, Size, Color, Transparency level, Type case, Spacing, Blend mode, etc. and set formatting, buffers, backgrounds, shadows, placement, and rendering options. Click **Apply** and then **OK** to exit the window.

7.3.2.5 Change Layer Scale Visibility

From the **Table of Contents**, right-click the name of the layer and select **Properties** in the drop-down menu, as shown in [Figure 8](#) and left-click to open the layer properties window. This opens the **Layer Properties** window shown in [Figure 10](#).

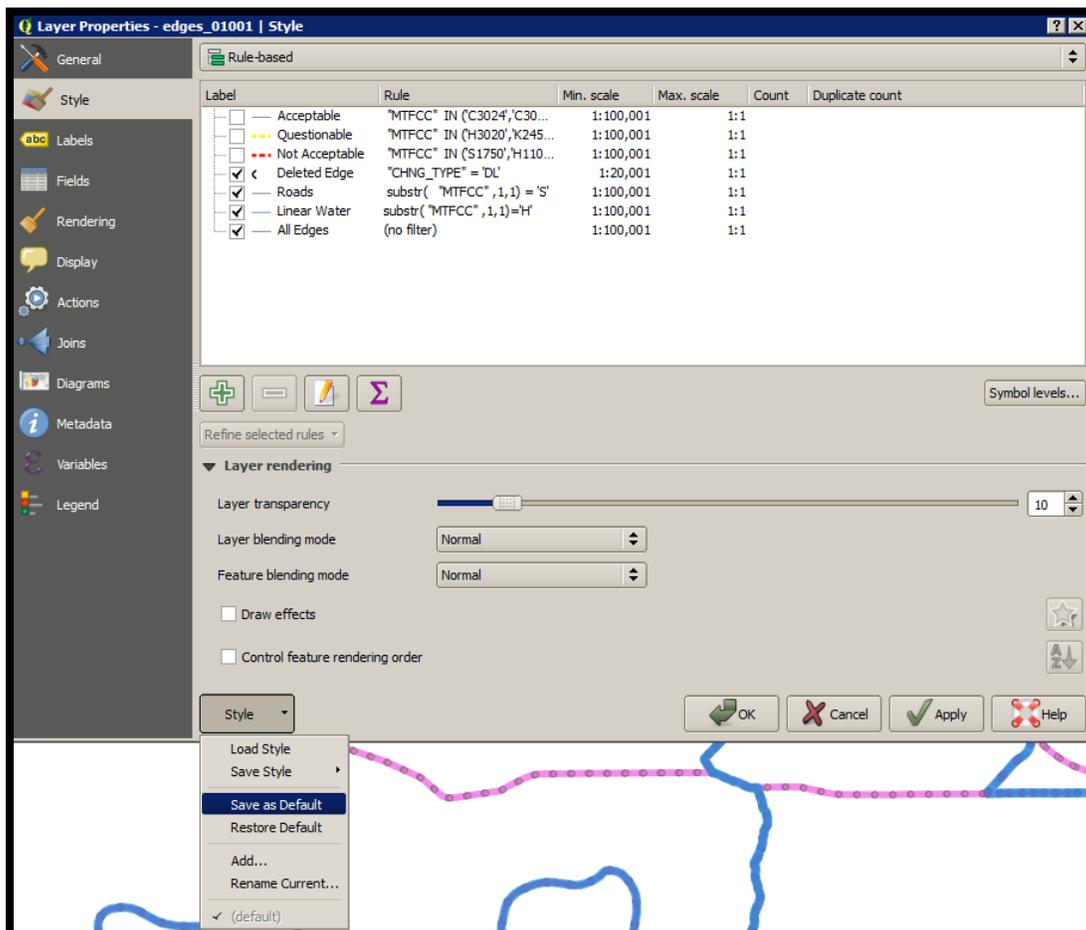


Figure 10. Layer Properties Window – Style Menu

Click the **Style** menu on the left side of the window. Choose each row, or all rows, to change the **Min. Scale** field to an appropriate scale. At the bottom left of the window, within the **Style** drop-down, choose **Set as Default**. Click **Apply** and then **OK** to exit the window. Setting the layer visibility means the layer will not display until reaching a scale below the set Min. Scale.

Note: Participants can also set the scale dependent visibility in the **General** menu within the **Layer Properties** window by setting the **Minimum (exclusive)** value.

7.4 Toolbars

There are two toolbars for GUPS, as shown below. The **Standard toolbar** and **PSAP toolbar** are located at the top of the GUPS page. These toolbars offer general GIS and system tools and allow participants to make specific program updates. The top toolbar is the **Standard toolbar**, which provides map navigation, data query and manipulation tools. The **PSAP toolbar** provides the functionality needed for the PSAP. Hover the mouse over any toolbar button to see the name of the tool it represents.

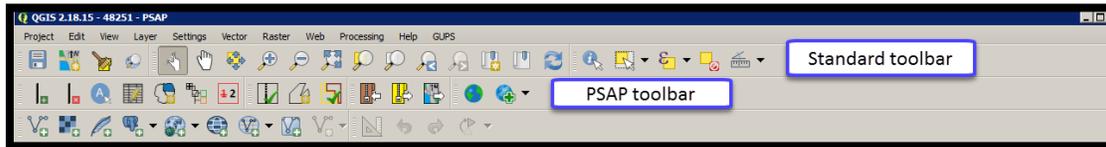


Figure 11. GUPS Toolbars

Note: Participants may move the toolbars and re-dock them to their own preference. For example, if a participant prefers that the **Manage Layers toolbar**, discussed in a later section, to appear at the top of the page, they can drag it there. This allows for the expansion of the area available for the **Table of Contents** and the **Map View**.

7.4.1 Standard Toolbar

The **Standard toolbar**, shown in [Figure 12](#), provides the necessary tools to interact with the map and layers. It includes three separate sub-toolbars, identified by the grouping bars or marker on the toolbar, shown in [Figure 13](#). The first sub-toolbar contains the buttons for saving projects, changing map projects and conducting searches. This sub-toolbar is the **Project toolbar**. The second sub-toolbar contains the buttons for navigation. This sub-toolbar is the **Map Navigation toolbar**. The third sub-toolbar provides tools for selecting features, making measurements, creating special bookmarks, and working with the layer's attribute tables. It is the **Attributes toolbar**.



Figure 12. Standard Toolbar

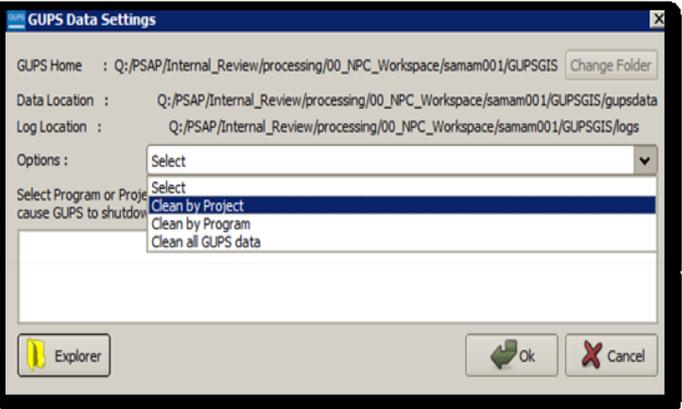
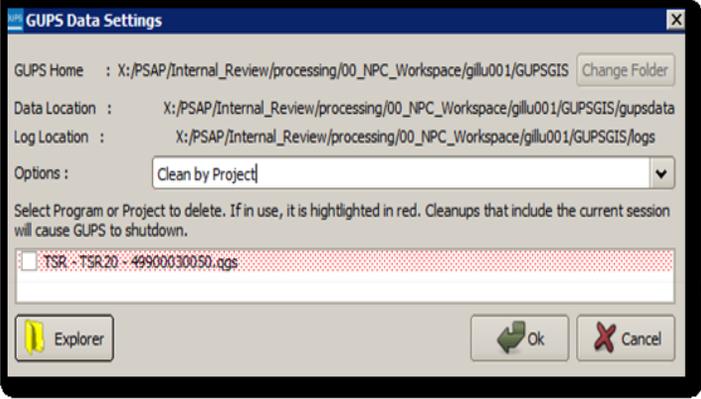
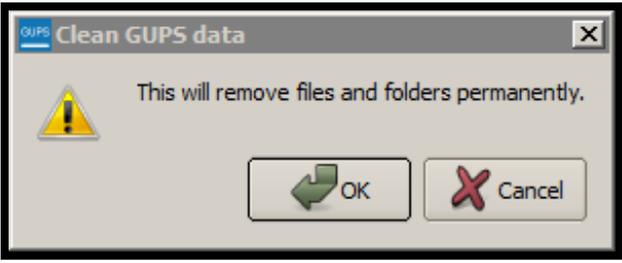
To rearrange the toolbars, left-click and hold the sub-toolbar marker (shown with blue below) then drag it to the desired location. Release the mouse button to set the toolbar in the new location.

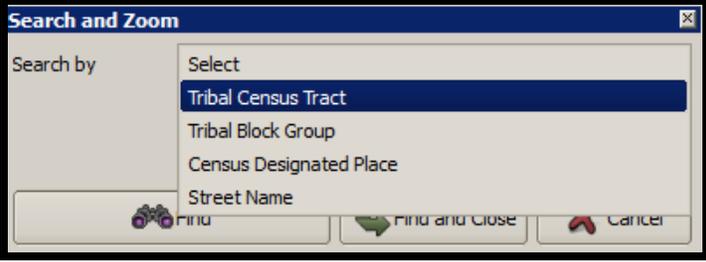


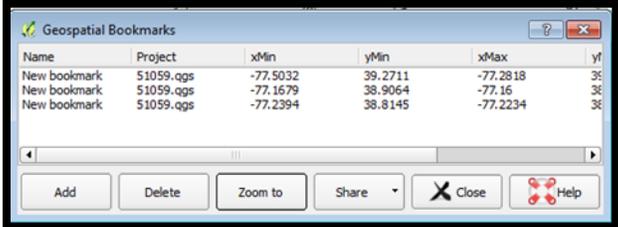
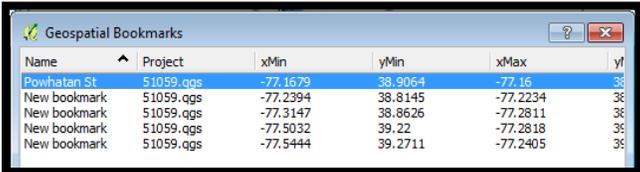
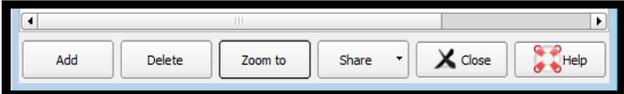
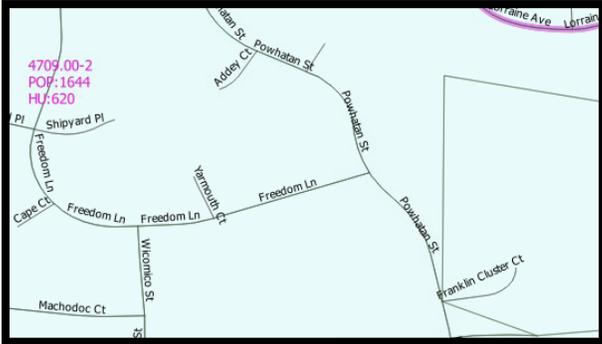
Figure 13. Sub-Toolbar Markers

[Table 15](#) defines the purpose of each button on the **Standard toolbar**. A few of the buttons listed in the table include examples or links to additional tables for further explanation of the button.

Table 15: Standard Toolbar Buttons, Names, and Functions/Descriptions

Button	Name	Function/Description
Project Toolbar Grouping		
	Save	Click the Save button to save the current project, including any change to the layer properties, projection, view extent, and layers.
	Map Management	Click the Map Management button to choose the participant program in GUPS and the county to update. GUPS automatically loads a set of default data layers for the chosen program.
	GUPS Data Settings	<p>Warning! This tool deletes files and folders permanently! Click the GUPS Data Settings button to <i>open the GUPS Data Settings window</i>. Click the Options drop-down menu and select Clean by Project.</p>   <p>From the list that returns, check the box to the left of the project name to select it for deletion. Click OK to continue. <i>GUPS displays a warning message to confirm the action removes files and folders permanently</i>. Clean-ups of the current session (highlighted in red in the choices list) cause GUPS to close.</p>  <p>Click OK to proceed with deletion.</p>
	Search and Zoom	Click the Search and Zoom button to search the map by census tract, block group, census designated place, census county division (if applicable), or street name.

Button	Name	Function/Description
		 <p>After selecting the Search by choice, a subsequent selection field appears for the participant to choose the specific value to search for in the tribal entity (e.g., Tribal Census Tract). Once selected, click the Find or Find and Close button to zoom and center the Map View on the selection.</p>
Map Navigation Toolbar Grouping		
	Touch Zoom and Pan	Click the Touch and Zoom button to zoom and pan using finger gestures on a touchscreen computer. This functionality also works with the roller ball on the mouse.
	Pan Map	Click the Pan button to re-center the map in the Map View at the location clicked in the map while preserving the map scale.
	Pan Map to Selection	Click the Pan to Selection button after selecting a feature on the map (or in the attribute table) to re-center the map based on the selected feature(s).
	Zoom In	Click the Zoom In button to increase the map scale after clicking on the map and to display the map in Map View at a larger scale.
	Zoom Out	Click the Zoom Out button to decrease the map scale after clicking on the map and to display the map in Map View at a smaller scale.
	Zoom Full	Click the Zoom Full button to display the map at the full extent of the county.
	Zoom to Selection	Click the Zoom to Selection button after selecting a feature on the map (or in the attribute table) to view the feature at the scale of the selected feature.
	Zoom to Layer	Click the Zoom to Layer button after selecting a layer in the Table of Contents to display the map at the extent of the selected layer.
	Zoom Last	Click the Zoom Last button to return to the previous zoom extent.
	Zoom Next	Click the Zoom Next button to move forward to the next zoom extent.

Button	Name	Function/Description
	New Bookmark	<p>Click the New Bookmark button to create, name, and save geographic locations in the Map View for future reference.</p> <p>To create and save a geographic location, first zoom to the location to bookmark and then select New Bookmark. <i>The Geospatial Bookmarks window opens.</i></p>  <p>Click on a row named New bookmark, backspace over the name “New bookmark” to delete the name, and enter a descriptive name for the bookmark (255-character limit). Click the Close button to add the new bookmark.</p>
	Show Bookmarks	<p>Click the Show Bookmarks button to view and manage the bookmarks.</p>  <p>To zoom to a bookmark, click on a bookmark name in the Geospatial Bookmarks dialog box and then click the Zoom to button.</p>  <p><i>The Map View zooms to the bookmark.</i></p>  <p>To delete a bookmark, click a bookmark name and click the Delete button.</p>
	Refresh	<p>Click the Refresh button to refresh the screen at its current extent.</p>

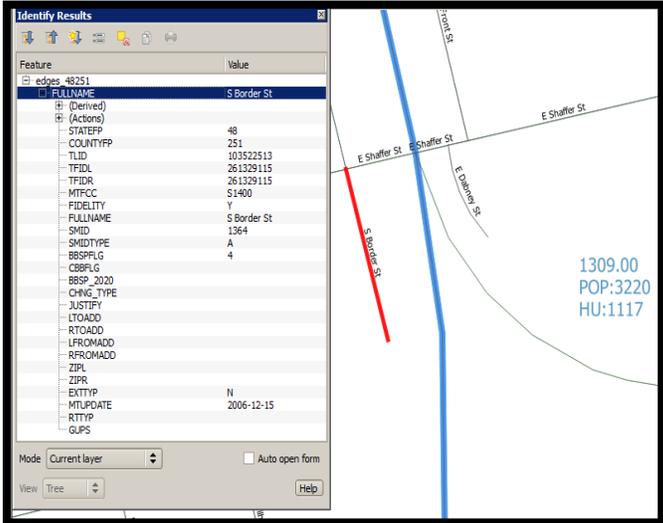
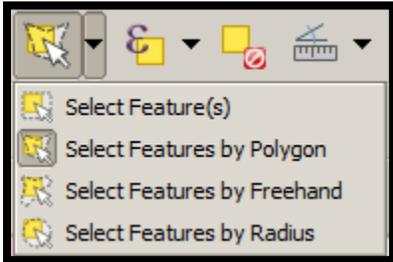
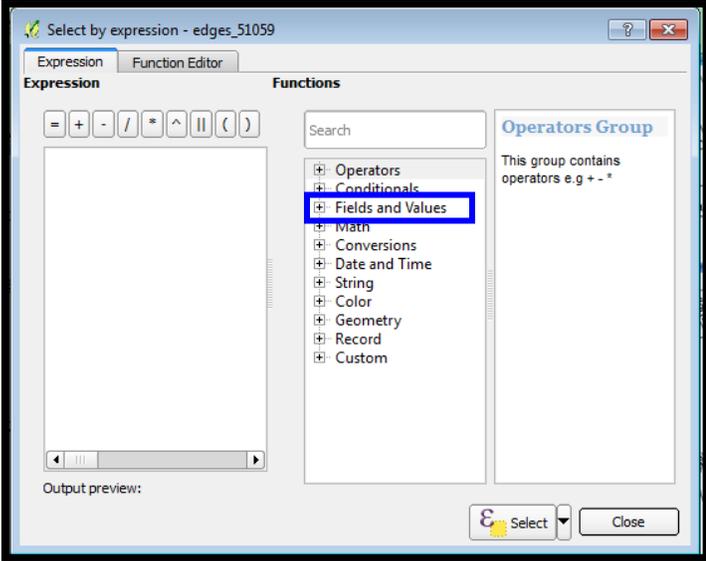
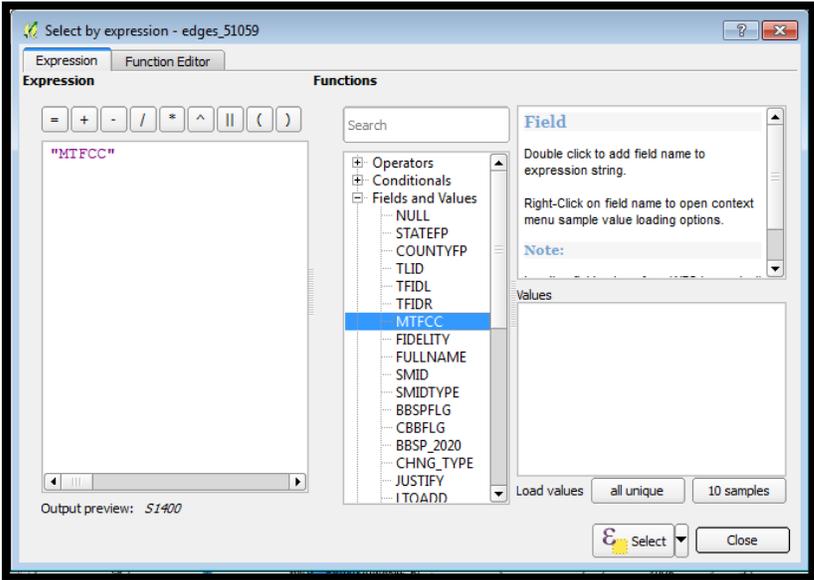
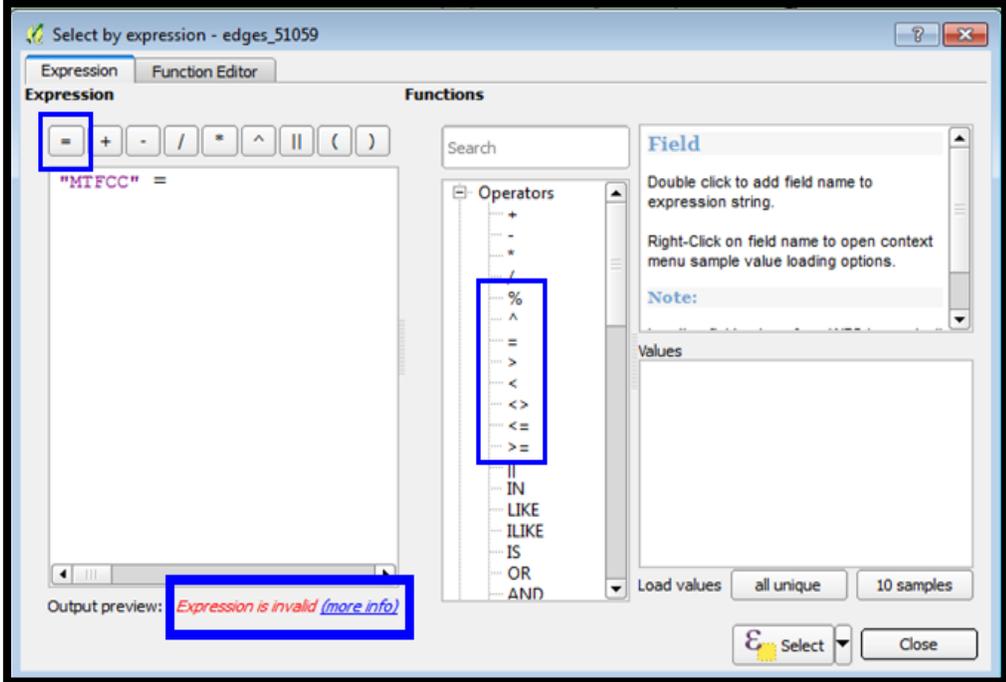
Button	Name	Function/Description
Attributes Toolbar Grouping		
	Identify Features	<p>Click the Identify Features button, followed by a click on a feature on the map, to identify the feature. <i>The selected feature appears in red in the Map View and the results appear in the Identify Results window.</i></p> 
	Select Feature(s) by Area or Single Click	<p>Click the Select Feature(s) by Area or Single Click button to select layer features in the map window with a single click, dragging a box, or drawing graphics on the screen.</p>  <p>To select a single feature, click the Select Features button, choose Select Feature(s) from the drop-down menu, and click the feature on the map. To select multiple features, hold down the Ctrl key while selecting more than one feature. To remove one or more features from a selection of multiple features, hold down the Ctrl key and click the feature(s) again. Participants can also use Select Features by Polygon, Select Features by Freehand, and Select Features by Radius tools to select multiple features using graphics they draw on the screen.</p>
	Select Features Using an Expression	<p>Click the Select Features Using an Expression button to select features by querying the attribute table based on table fields and/or values in the fields. See Table 16 for an example of using the Select Features Using an Expression tool to view the features in the edges layer that have an MTFCC code of P0001.</p>
	Deselect Features from All Layers	<p>Click the Deselect Features from all Layers button to deselect the selected features in all layers in a single action.</p>
	Measure	<p>Click the Measure button to measure the distance between two or more points, an area, or an angle on a map. See Table 17 for examples of using the Measure tool.</p>

Table 16: Select Features Using an Expression Button

Step	Action and Result
<p>Step 1</p>	<p>With the edges layer selected in the Table of Contents, click the Select Features Using an Expression button on the Standard toolbar.</p> 
<p>Step 2</p>	<p>The Select by Expression dialog box opens. Click on the '+' next to Fields and Values to expand it.</p> 
<p>Step 3</p>	<p>Double click on a field name to add it to the Expression window. <i>This example depicts the selection of the MAF/TIGER Feature Classification Code (MTFCC) field and its field name appearance in the Expression window.</i></p> 

Step	Action and Result
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Step 4	<p>Single click on an operator button to add it to the Expression window. <i>In this example, the “=” was chosen.</i></p> <p>Note: There are more operators available than those shown above the Expression window. Click the Operators menu in the center window of the dialog box to see additional options, including commonly used expressions such as <, >, <=, >=.</p>
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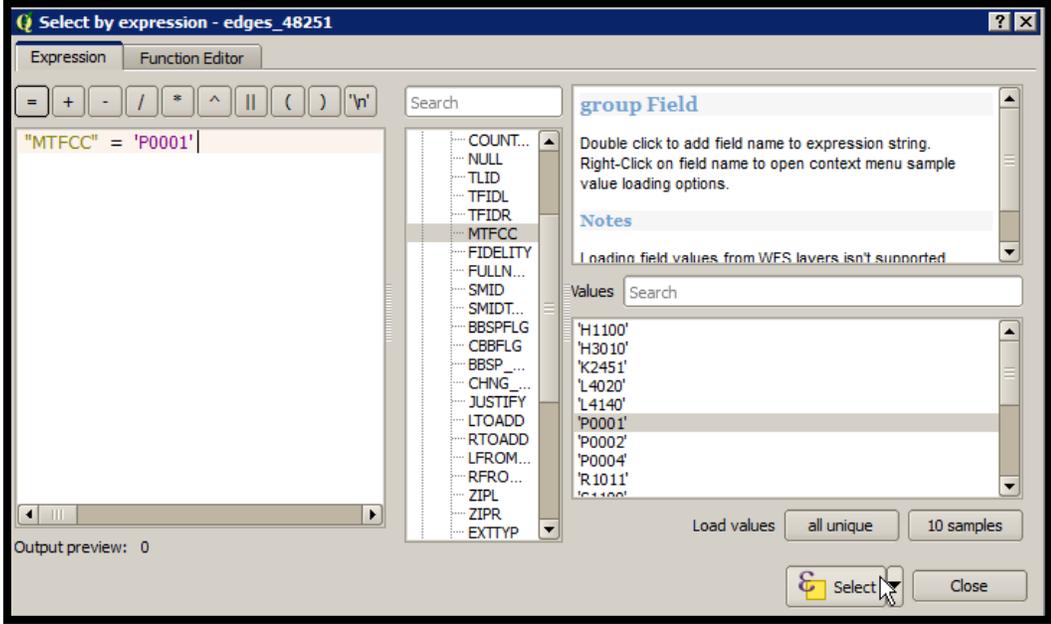
For this screenshot, notice the **Output preview:** message below the window indicates the expression is invalid because the value for the expression is missing.

Step 5	<p>Reselect MTFCC. Click the Load values - all unique button, which shows all of the values for the chosen field name. Double click a value to <i>add it to the Expression window</i>.</p> <p>For more information about MTFCC codes, please refer to Appendix F or the following webpage: <http://www.census.gov/geo/reference/mtfcc.html>.</p>
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Step **Action and Result**

Step 6 For this example, double click the value “P0001” (Nonvisible Linear Legal/Statistical Boundary) in the values window to *add it to the Expression window*.



To execute the expression, click the  **Select** button.

Step 7 The features meeting the expression, “MTFCC” = ‘P0001’, are highlighted on the map.

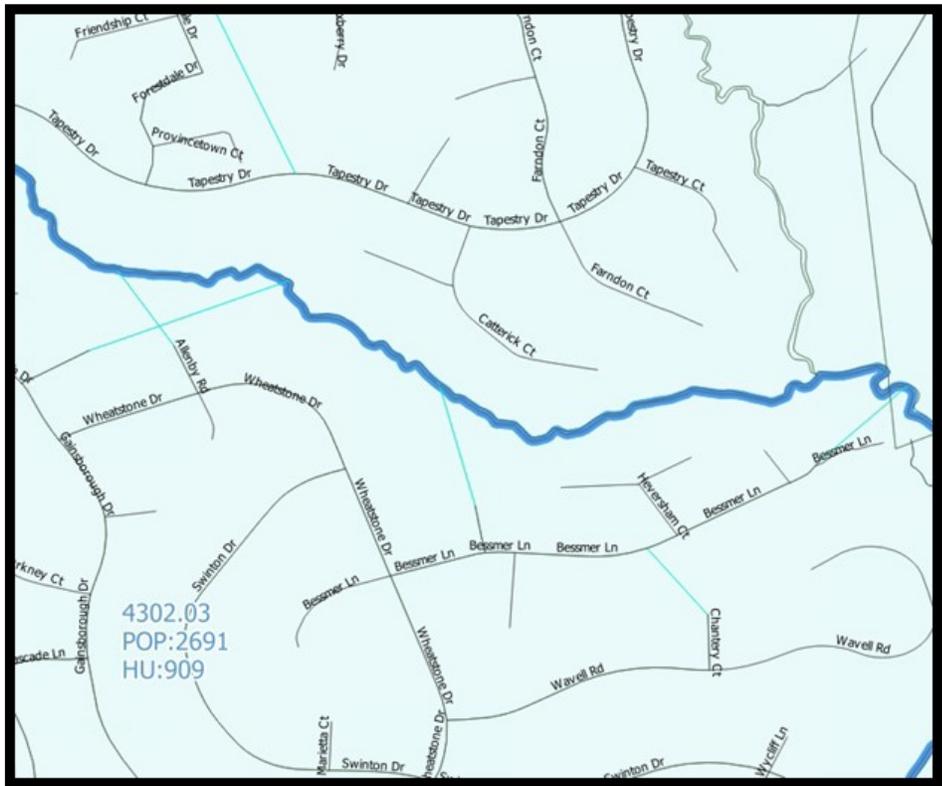
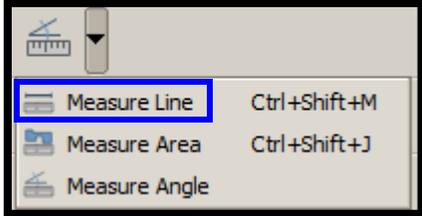
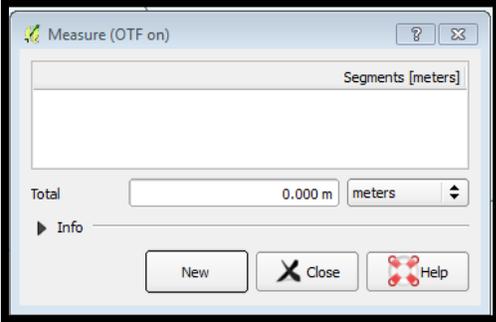
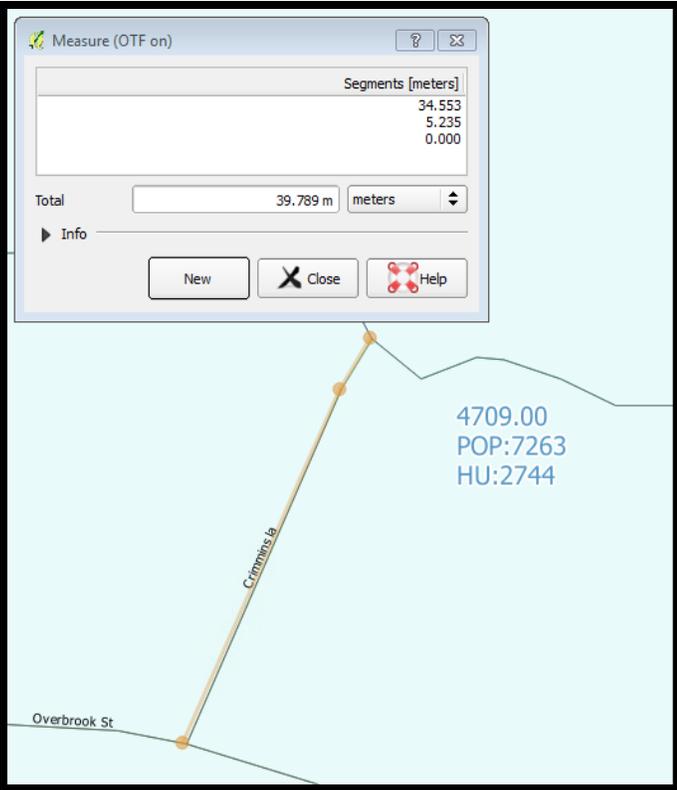
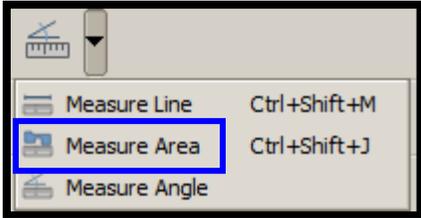
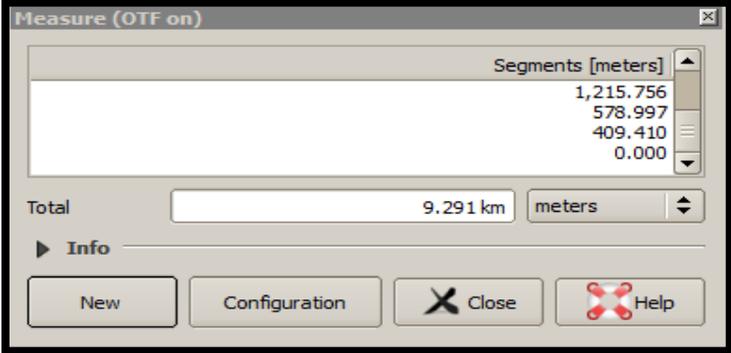
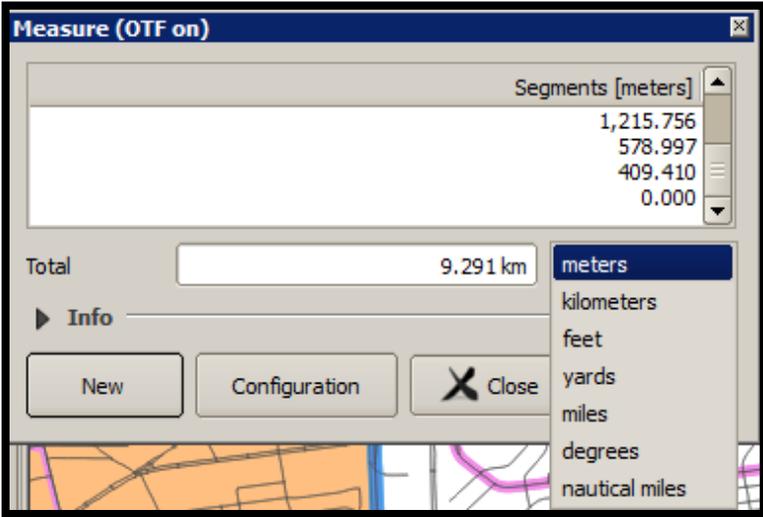
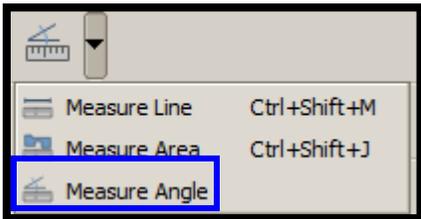
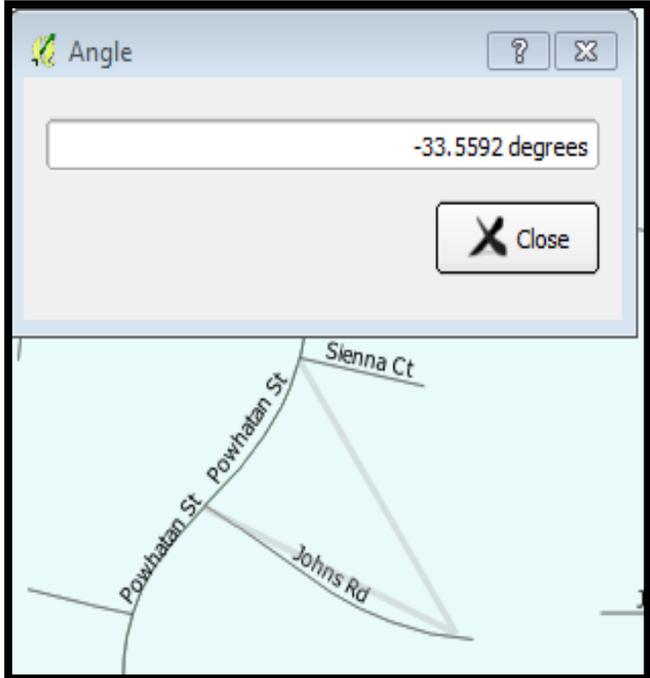


Table 17: Measure Button

Step	Action and Result
<p>Step 1</p>	<p>To measure the distance between two points on the map, select the Measure button and then Measure Line choice.</p>  <p>The Measure (OTF on) dialog box opens.</p> 
<p>Step 2</p>	<p>Zoom to the desired map location to take the measurement. Left-click the beginning point on the map and continue clicking points until reaching the final point. Right-click to show completion of point selection. <i>The length of each segment of the line, as well as the total length of the line between the beginning point and the ending point, appear in the Measure box.</i></p>  <p>Click New to start another measurement or click Close to close the Measure tool.</p>

Step	Action and Result
Step 3	<p>To measure the area on the map, select the Measure tool and then Measure Area choice.</p>  <p>The <i>Measure (OTF on)</i> dialog box opens.</p> 
Step 4	<p>Zoom to the desired map location to take the measurement. Left-click on the map to begin drawing a polygon around the area to measure. Left-click at each vertex of the polygon. Right-click to show completion of the polygon. <i>The polygon's area appears in the Total field.</i> Use the drop-down to the right to see the area in other units of measure. Meters, kilometers, feet, yards, miles, degrees, and nautical miles are the unit of measure choices.</p>  <p>Click New to start another measurement or click Close to close the Measure tool.</p>
Step 5	<p>To measure an angle on the map, select the Measure tool and then Measure Angle choice.</p> 

Step	Action and Result
Step 6	<p>Zoom to the desired map location to take the measurement. Left-click on the map to begin drawing the angle. Drag the mouse to create the first side of the angle, then left-click, and drag the mouse again to draw the second leg. <i>The Angle box opens showing the angle measurement.</i></p>  <p>Click Close to close the Measure tool.</p>

7.4.2 PSAP Toolbar

The **PSAP toolbar**, shown [Figure 14](#), provides the software functionality to complete PSAP review and update activities. It includes four separate sub-toolbars, identified by the grouping bars described earlier in the **Standard toolbar** section.

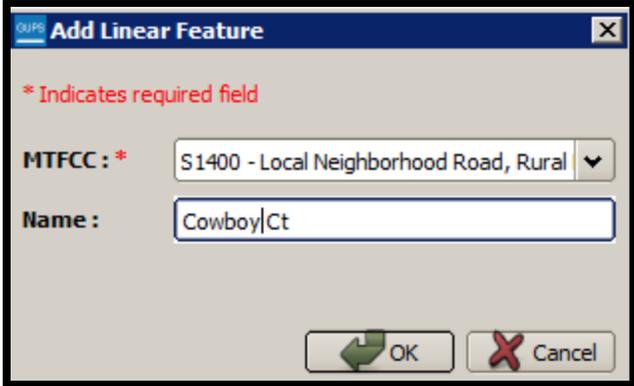


Figure 14. PSAP Toolbar

The first sub-toolbar contains the buttons for adding and deleting linear features, modifying linear feature attributes and areal features, displaying names and the legend, and renumbering tribal block groups. The second sub-toolbar contains buttons for conducting geography and criteria reviews. The third sub-toolbar contains buttons for importing shapefiles, exporting the map to a zip file, and exporting a map to print. The fourth sub-toolbar contains buttons for adding an internet map service and adding imagery.

An additional toolbar, the **Manage Layers toolbar**, allows participants to add vector and raster data layers and import data tables. [Table 18](#) and [Table 28](#) describe the **PSAP toolbar** and the **Manage Layers toolbar** respectively.

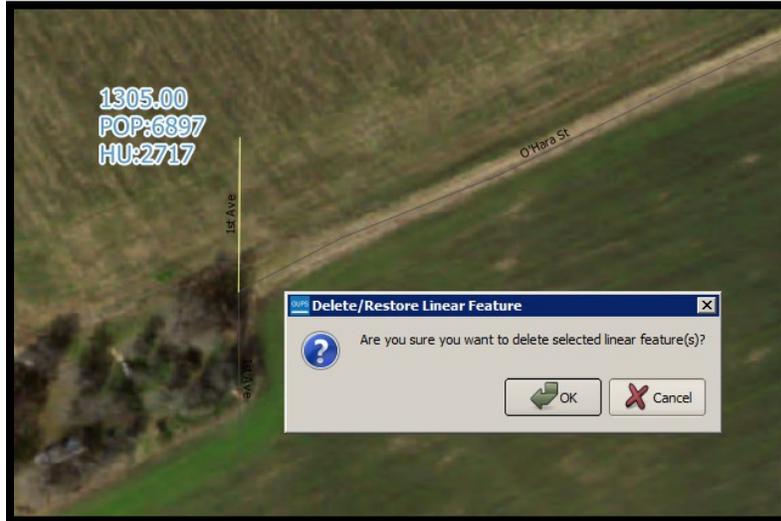
Table 18: PSAP Toolbar Buttons, Names, and Functions/Descriptions

Button	Name	Function/Description
	<p>Add Linear Feature</p>	<p>Click the Add Linear Feature button to digitize a new linear feature. To add a linear feature, click the mouse to begin the line and continue to click at each vertex point of the line. Right-click the mouse to complete the new line, shown in pink in the image below.</p>  <p>Upon completion of digitization, the Add Linear Feature dialog box opens. Click the MTFCC drop-down menu to choose the appropriate feature classification code. If named, type the name of the feature in the Name field.</p>  <p>Note: To locate information on the MAF/TIGER Feature Classification Codes (MTFCC) codes, refer to Appendix F. Refer to Appendix H for a list of standardized street type abbreviations since the street type (i.e. St., Rd., Ave., Cir., etc.) is required to upload the feature correctly.</p>

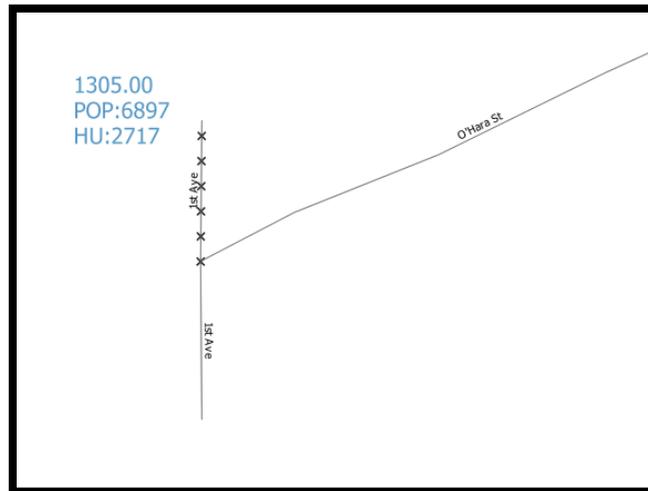


Delete/Restore Linear Feature

Click the **Delete/Restore Linear Feature** button to delete a linear feature. Participants can restore linear features if deleted in error. To delete a linear feature, click the mouse on the feature to delete.

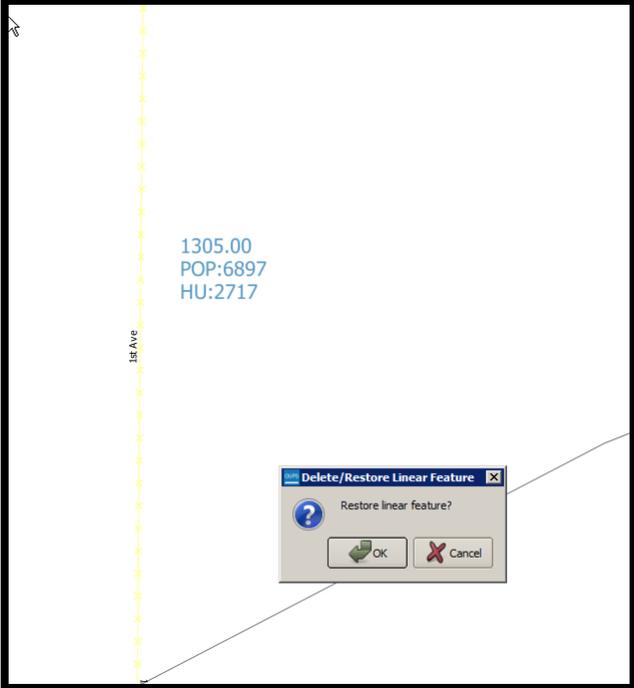
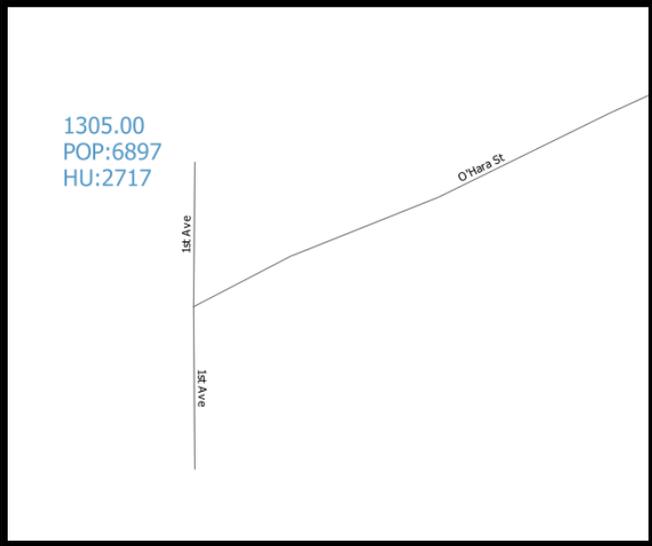


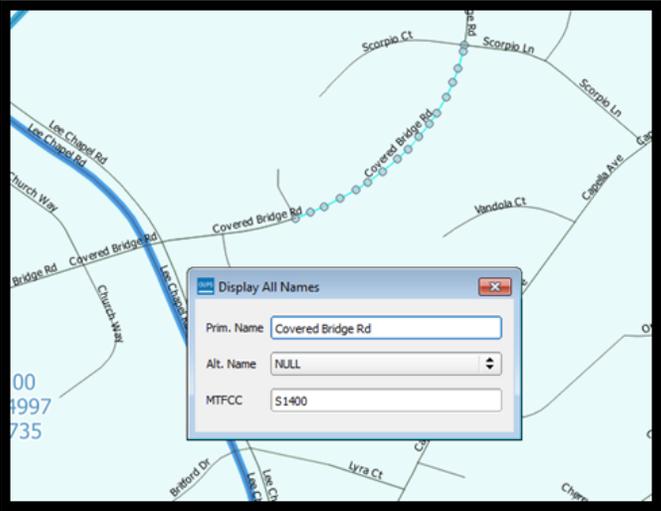
The **Delete/Restore Linear Feature** confirmation dialog box opens with a question about certainty of the delete. Click **OK** to mark the feature for deletion. The deleted feature appears on the map with a gray X's on top of the linear feature.

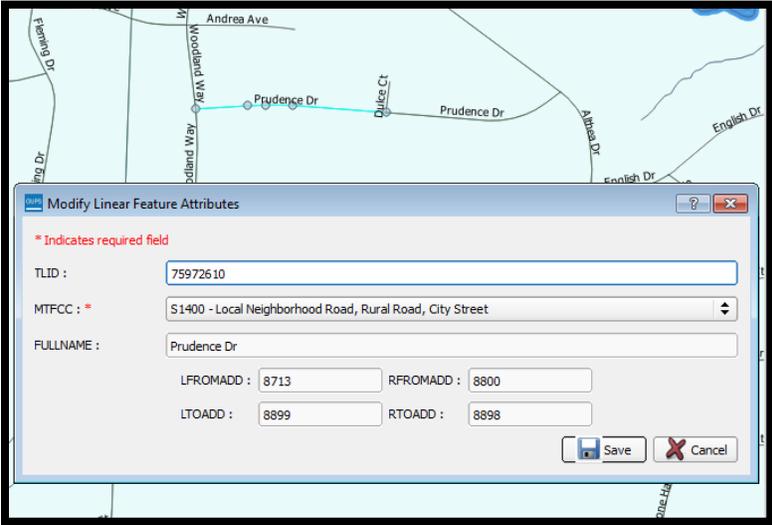
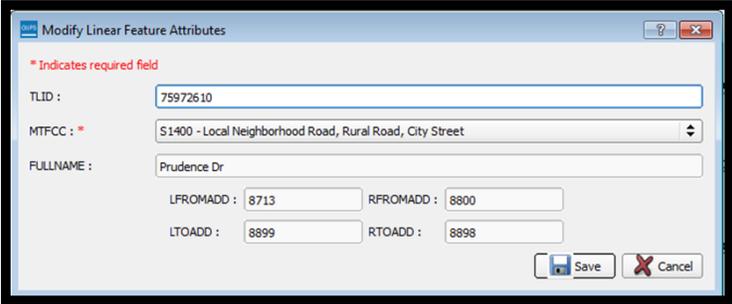


Note: When a feature is marked for deletion, GUPS assigns a delete flag to the feature in the attribute table. The deletion occurs later if it remains marked as such. Assigning a flag rather than immediately deleting the feature allows for the restoration of the feature if deleted in error.

To restore a deleted linear feature, click on the **Delete/Restore Linear Feature** button. Click the feature on the map previously marked for deletion (*highlights in light yellow*).

Button	Name	Function/Description
		 <p>The <i>Delete/Restore Linear Feature</i> confirmation dialog box opens with question restore the line. Click the OK button to remove the delete line flag from the attribute table and restore the feature.</p> 

Button	Name	Function/Description
	<p>Display All Names</p>	<p>Click the Display All Names button to display the primary and alternate names for a street. It also shows the MTFCC for other linear features such as streams, railroads, non-visible features.</p> <p>To check for the name of a street feature, click the Display All Names button and then click on the street on the map. The selected feature highlights in light blue and the Display All Names dialog box opens showing the primary name in the Prim. Name field and the alternate name, if one exists, in the Alt. Name field. To see all alternate names, click the drop-down arrow to the right of the Alt. Name field. If no alternate name exists, 'NULL' appears in the Alt. Name field.</p> 

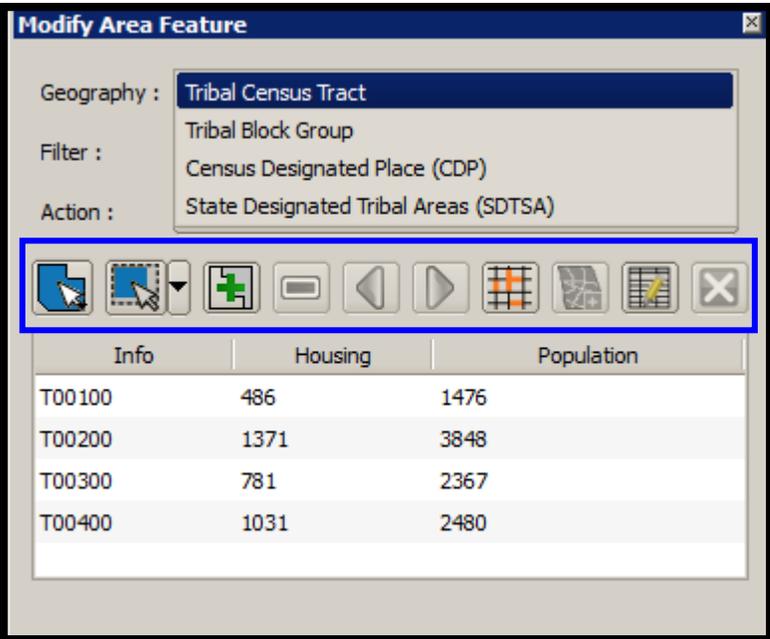
Button	Name	Function/Description
	<p>Modify Linear Feature Attributes</p>	<p>Click the Modify Linear Feature Attributes button to edit attribute fields for a selected linear feature.</p> <p>To edit the attribution of a linear feature, click the Modify Linear Feature Attributes button and then click the linear feature to edit.</p>  <p>The Modify Linear Feature Attributes dialog box opens with the TIGER/Line Feature ID (TLID) of the feature selected. The MTFCC field displays the assigned MTFCC. If the feature is unnamed, the FULLNAME field is blank. The TLID field is not eligible for modification.</p> <p>To update the MTFCC field, click the down-drop box and select the correct MTFCC code. This field is required for all linear features.</p>  <p>To update the FULLNAME field, enter the name if the field is blank. If the field contains an incorrect name, highlight the existing name and press the Delete key from the keyboard or backspace over the existing name to clear the field prior to entering the current/correct name.</p>
	<p>Modify Area Feature</p>	<p>Click the Modify Area Feature button to choose the geography, filter, and action for the statistical geographies in the given entity (county or tribal). Applying a search filter to each geography helps locate the statistical geographies that do not meet specified criteria. Refer to Table 19 for several detailed examples of its use. This button is a major component used for updating statistical geographies.</p>

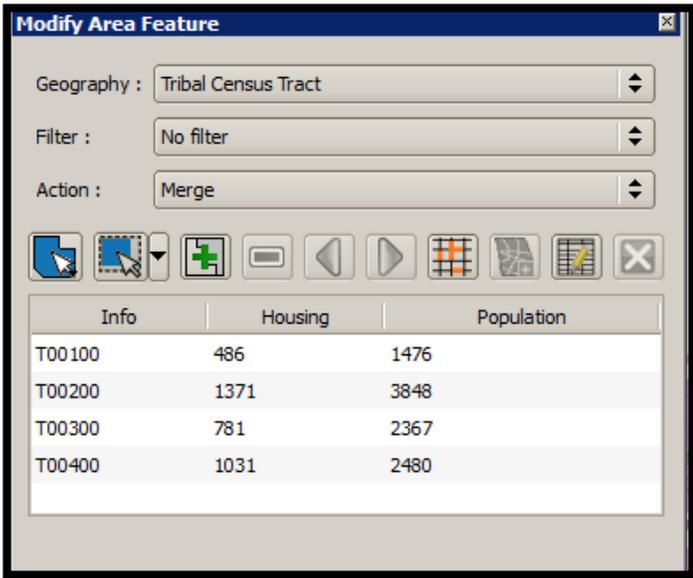
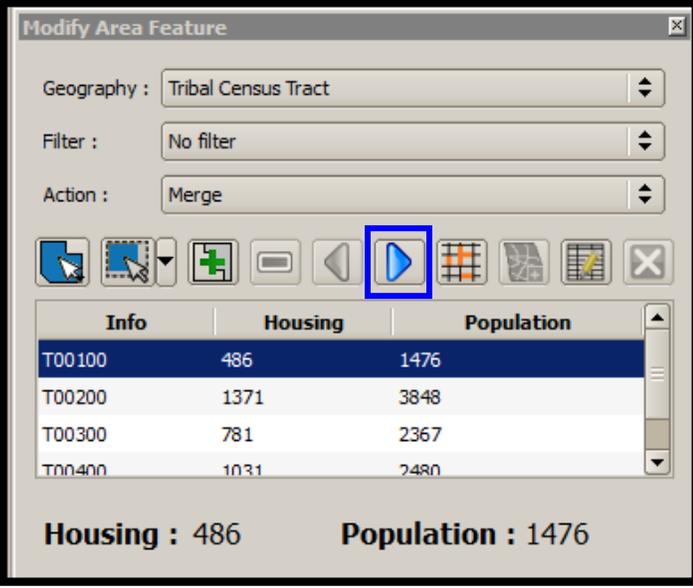
Button	Name	Function/Description
	Show/Hide Legend	Click the Show/Hide Legend button to hide the layer list. Click it again to show the layer list.
	Renumbering Tool	Click the Renumbering Tool button to renumber newly created or modified tribal block groups resulting from merges or splits. Renumbering is not required. Participants choosing to renumber should execute this tool after all tribal block group work concludes. Save the project to make the changes permanent.
	Geography Review Tool	Click the Geography Review Tool button to filter a layer based on field values in the attribute table. Refer to Table 21 for details on its use.
	Review Change Polygons	Click the Review Change Polygons button to view the review the updated polygons created from the edits made to tribal census tracts, tribal block groups, and CDPs where applicable. Refer to Table 22 for details on its use.
	TSR Criteria Review	Click the TSR Criteria Review button to generate a list of threshold failures and to correct the failures or provide a justification for the failures. This mandatory check is required before creating a data output file. Refer to Section 9.1 and Table 23 for details on its use.
	Import County Zip	Click the Import County Zip button to import a participant’s “DataDirectory” output .zip file into GUPS for further review and update. Refer to Table 24 for details on its use. Note: GUPS generates this “DataDirectory” .zip file as part of the Export to Zip → Share with Another Participant function described in Table 25 .
	Export to Zip	Click the Export to Zip button to create the .zip file containing all required data and shapefiles for submission to the Census Bureau or to share with another participant. Refer to Table 25 for details on its use.
	Print Map to File	Click the Print Map to File button export a printable map in .pdf, png, .tif, or jpeg format. Refer to Table 26 for details on its use.
	Internet Map Service	Click the Internet Map Service button to load a GIS map service from the internet into GUPS to assist with overlaying external source visuals/data. Note: An internet connection is required for this button to function.
	Add Imagery	Click the Add Imagery button to add either USGS or Esri imagery to overlay the tribal entity shapefiles. Remove imagery using the same button. Refer to Table 27 for details on its use.
	Undo	Click the Undo button to revert the last change made by the participant. After making the layer where the change occurred active in the Table of Contents , this button activates on the Advanced Digitizing toolbar and in the Edit menu if the Undo action is permissible. Note: This button (and action) is very important for a participant to utilize prior to saving any changes. Participants should be confident with the change they have made prior to saving. If not, they should perform the Undo action.
	Redo	Click the Redo button to restores the last change made by the participant. This button activates on the Advanced Digitizing toolbar if a redo action is permissible.

7.4.2.1 Modify Area Feature Button

The **Modify Area Feature** button allows participants to review and update tribal census tracts, tribal block groups, and census designated places (CDPs). Please refer to [Chapter 8](#) for detailed review and update instructions of each statistical area. The following section discusses the mechanics of the tool itself, not the criteria for which to use the tool.

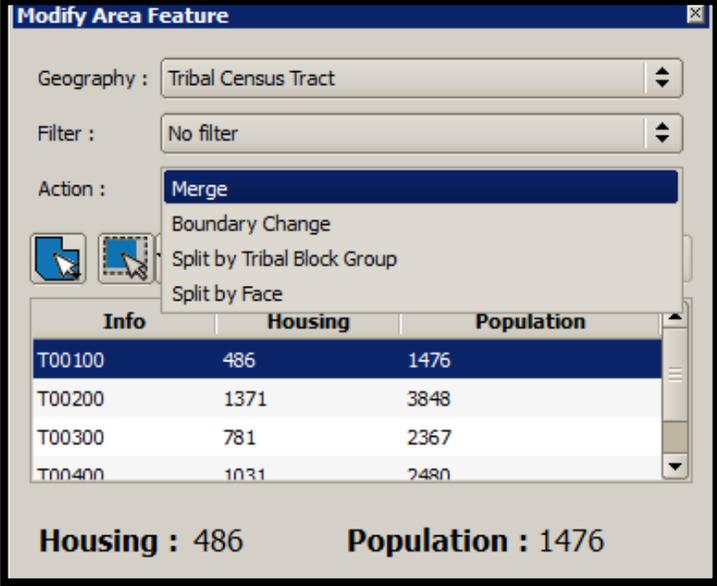
Table 19: Modify Area Feature Button

Step	Action and Result															
Step 1	Click the Modify Area Feature button. 															
Step 2	After selection of the editable layers, the <i>Modify Area Feature</i> dialog box opens. Click the Geography drop-down menu to select the geography to review and update.  <p>Geographies that appear in the Geography drop-down menu are editable with the tools located above the information window; however, those tools change based upon the geography selected.</p> <p>Note: The State Designated Tribal Areas (SDTSA) choice appears in the Geography drop-down menu for Census Bureau use only.</p> <table border="1" data-bbox="516 1066 1230 1306"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00100</td> <td>486</td> <td>1476</td> </tr> <tr> <td>T00200</td> <td>1371</td> <td>3848</td> </tr> <tr> <td>T00300</td> <td>781</td> <td>2367</td> </tr> <tr> <td>T00400</td> <td>1031</td> <td>2480</td> </tr> </tbody> </table>	Info	Housing	Population	T00100	486	1476	T00200	1371	3848	T00300	781	2367	T00400	1031	2480
Info	Housing	Population														
T00100	486	1476														
T00200	1371	3848														
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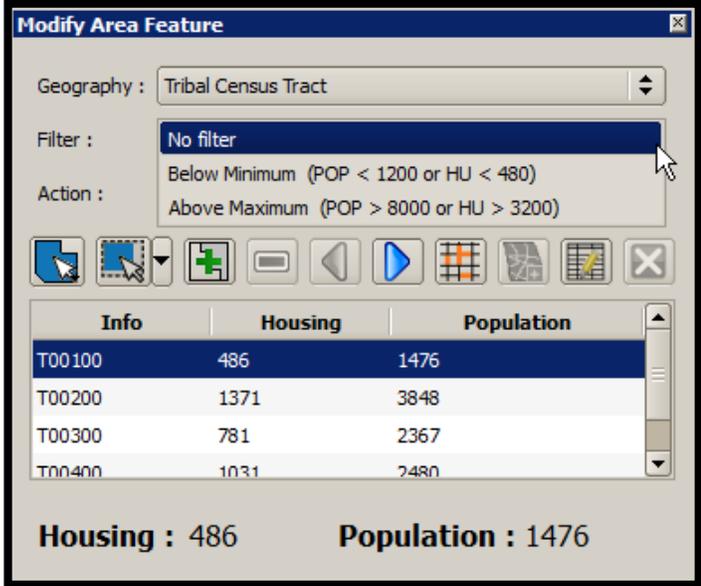
Step	Action and Result															
Step 3	<p>Choose Tribal Census Tract from the Geography drop-down menu. <i>The default filter, No filter, displays all census tracts in the information window.</i></p>  <table border="1" data-bbox="544 562 1177 783"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00100</td> <td>486</td> <td>1476</td> </tr> <tr> <td>T00200</td> <td>1371</td> <td>3848</td> </tr> <tr> <td>T00300</td> <td>781</td> <td>2367</td> </tr> <tr> <td>T00400</td> <td>1031</td> <td>2480</td> </tr> </tbody> </table>	Info	Housing	Population	T00100	486	1476	T00200	1371	3848	T00300	781	2367	T00400	1031	2480
Info	Housing	Population														
T00100	486	1476														
T00200	1371	3848														
T00300	781	2367														
T00400	1031	2480														
Step 4	<p>Double click on a row in the list to select the tribal census tract. <i>The map zooms to the selected tract. The blue arrow tool activates allowing participants to tab through all pieces of T00100. See Table 20 for more information on its use.</i></p>  <table border="1" data-bbox="544 1276 1177 1455"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00100</td> <td>486</td> <td>1476</td> </tr> <tr> <td>T00200</td> <td>1371</td> <td>3848</td> </tr> <tr> <td>T00300</td> <td>781</td> <td>2367</td> </tr> <tr> <td>T00400</td> <td>1031</td> <td>2480</td> </tr> </tbody> </table> <p data-bbox="557 1486 1105 1528">Housing : 486 Population : 1476</p>	Info	Housing	Population	T00100	486	1476	T00200	1371	3848	T00300	781	2367	T00400	1031	2480
Info	Housing	Population														
T00100	486	1476														
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Step **Action and Result**

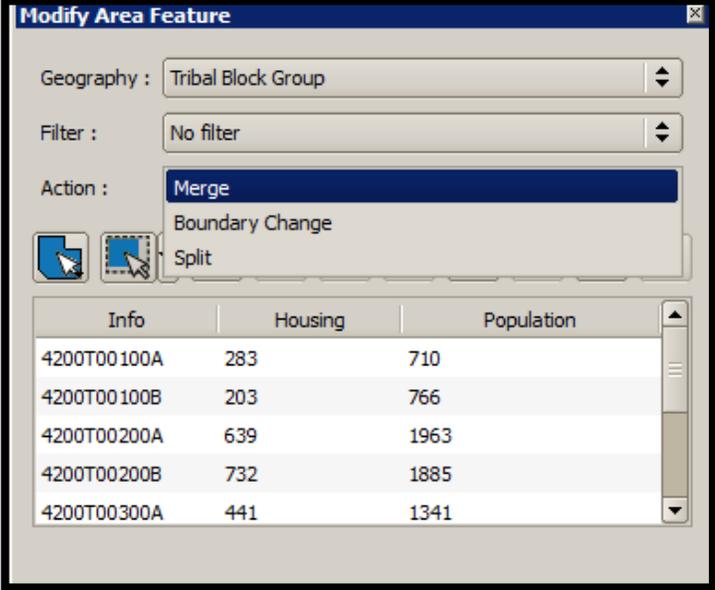
Step 5 The **Action** drop-down menu activates four separate types of updates, **Merge**, **Boundary Change**, **Split by Block Group**, or **Split by Face**.

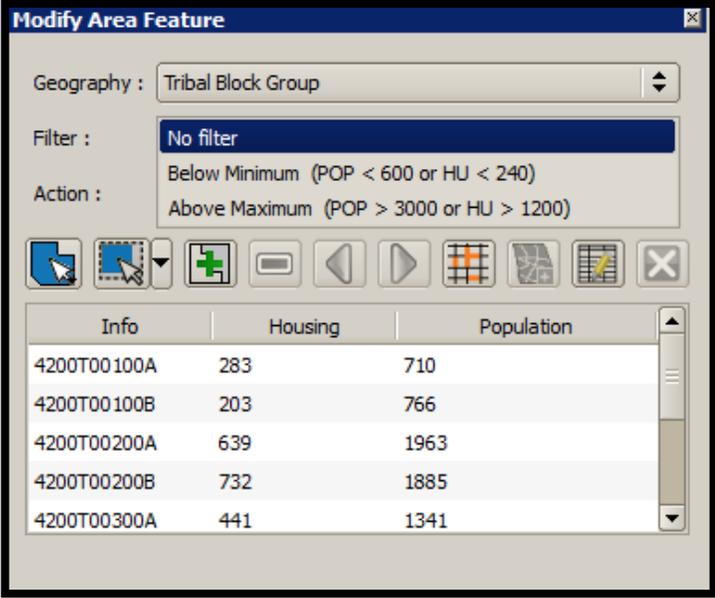


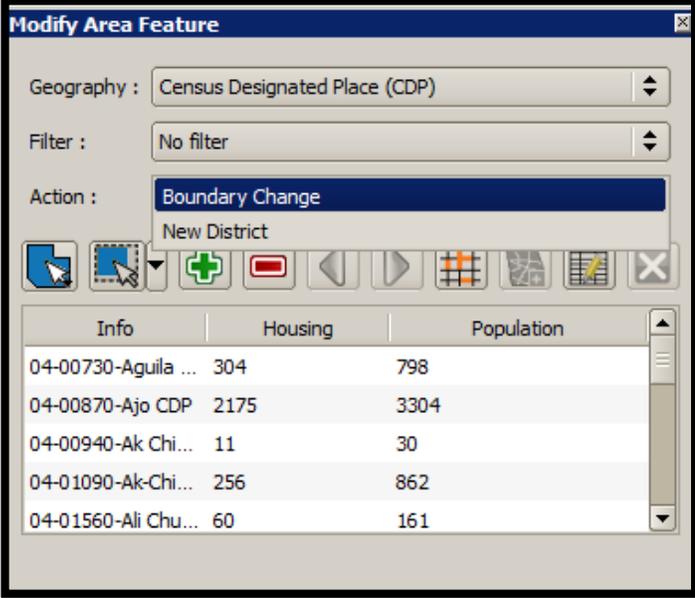
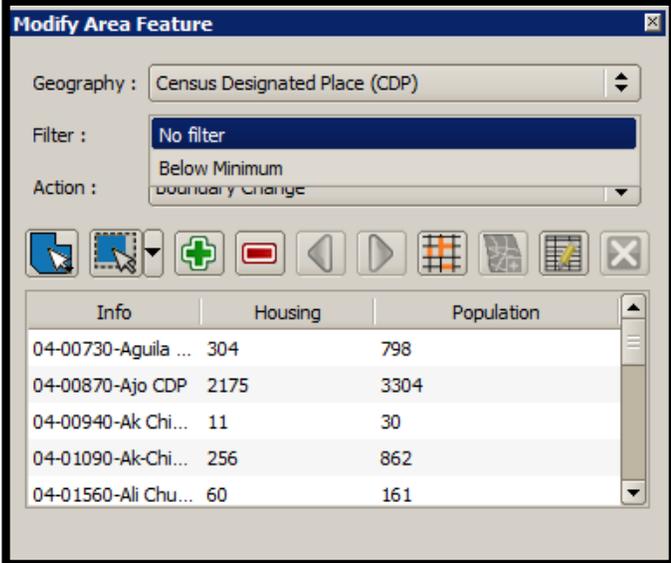
Step 6 With **Tribal Census Tract** selected, click the **Filter** drop-down menu to view census tracts that do not meet the population and housing unit criteria - (**below minimum** – numbers are below the minimum population and housing thresholds and **above maximum** – numbers are above the maximum population and housing thresholds). Refer to [Table 4: Tribal Census Tract Thresholds](#) for the 2020 population and housing unit criteria for tracts.



Step	Action and Result
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Step 7	<p>Selection of Tribal Block Group from the Geography drop-down menu enables three actions in the Action drop-down menu, Merge, Boundary Change, and Split.</p>  <table border="1" data-bbox="537 575 1195 804"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>4200T00100A</td> <td>283</td> <td>710</td> </tr> <tr> <td>4200T00100B</td> <td>203</td> <td>766</td> </tr> <tr> <td>4200T00200A</td> <td>639</td> <td>1963</td> </tr> <tr> <td>4200T00200B</td> <td>732</td> <td>1885</td> </tr> <tr> <td>4200T00300A</td> <td>441</td> <td>1341</td> </tr> </tbody> </table>	Info	Housing	Population	4200T00100A	283	710	4200T00100B	203	766	4200T00200A	639	1963	4200T00200B	732	1885	4200T00300A	441	1341
Info	Housing	Population																	
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4200T00100B	203	766																	
4200T00200A	639	1963																	
4200T00200B	732	1885																	
4200T00300A	441	1341																	

Step 8	<p>As described above for tribal census tracts, with Tribal Block Group selected, click the Filter drop-down menu to view the block groups that do not meet the population and housing unit criteria - (below minimum – numbers are below the minimum population and housing thresholds and above maximum – numbers are above the maximum population and housing thresholds). Refer to Table 6: Tribal Block Group Thresholds for the 2020 population and housing unit criteria for block groups.</p>  <table border="1" data-bbox="529 1360 1195 1589"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>4200T00100A</td> <td>283</td> <td>710</td> </tr> <tr> <td>4200T00100B</td> <td>203</td> <td>766</td> </tr> <tr> <td>4200T00200A</td> <td>639</td> <td>1963</td> </tr> <tr> <td>4200T00200B</td> <td>732</td> <td>1885</td> </tr> <tr> <td>4200T00300A</td> <td>441</td> <td>1341</td> </tr> </tbody> </table>	Info	Housing	Population	4200T00100A	283	710	4200T00100B	203	766	4200T00200A	639	1963	4200T00200B	732	1885	4200T00300A	441	1341
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4200T00200B	732	1885																	
4200T00300A	441	1341																	

Step	Action and Result																		
<p>Step 9</p>	<p>Selection of Census Designated Place (CDP) from the Geography drop-down menu enables two actions in the Action drop-down menu, Boundary Change and New District.</p>  <table border="1" data-bbox="537 583 1190 814"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>04-00730-Aguila ...</td> <td>304</td> <td>798</td> </tr> <tr> <td>04-00870-Ajo CDP</td> <td>2175</td> <td>3304</td> </tr> <tr> <td>04-00940-Ak Chi...</td> <td>11</td> <td>30</td> </tr> <tr> <td>04-01090-Ak-Chi...</td> <td>256</td> <td>862</td> </tr> <tr> <td>04-01560-Ali Chu...</td> <td>60</td> <td>161</td> </tr> </tbody> </table>	Info	Housing	Population	04-00730-Aguila ...	304	798	04-00870-Ajo CDP	2175	3304	04-00940-Ak Chi...	11	30	04-01090-Ak-Chi...	256	862	04-01560-Ali Chu...	60	161
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04-00940-Ak Chi...	11	30																	
04-01090-Ak-Chi...	256	862																	
04-01560-Ali Chu...	60	161																	
<p>Step 10</p>	<p>With Census Designated Place (CDP) selected, leave the Filter drop-down menu set to No Filter to view all of the CDPs in the county (or counties) that comprise the tribal entity with their population and housing unit information. CDPs are not limited to just the ones located within the tribal entity. Recall there are no minimum population and housing thresholds, but a CDP cannot have zero population and zero housing units. Refer to Appendix B for a summary of threshold criteria.</p>  <table border="1" data-bbox="548 1360 1177 1577"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>04-00730-Aguila ...</td> <td>304</td> <td>798</td> </tr> <tr> <td>04-00870-Ajo CDP</td> <td>2175</td> <td>3304</td> </tr> <tr> <td>04-00940-Ak Chi...</td> <td>11</td> <td>30</td> </tr> <tr> <td>04-01090-Ak-Chi...</td> <td>256</td> <td>862</td> </tr> <tr> <td>04-01560-Ali Chu...</td> <td>60</td> <td>161</td> </tr> </tbody> </table>	Info	Housing	Population	04-00730-Aguila ...	304	798	04-00870-Ajo CDP	2175	3304	04-00940-Ak Chi...	11	30	04-01090-Ak-Chi...	256	862	04-01560-Ali Chu...	60	161
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04-01560-Ali Chu...	60	161																	

Within the Modify Area Feature dialog box is a section of additional buttons used to implement changes to the various statistical geographies. [Figure 15](#) highlights the section of additional buttons while [Table 20](#) describes these buttons and their functionality in detail.

Note: The buttons that appear in this toolbar change depending on the geography and action chosen by the participant; therefore, **Figure 15** does not depict all of the potential buttons, but only those that appear with Tribal Census Tract and Merge selections. **Table 20** discusses all the buttons that appear at any point during a participant’s PSAP review.

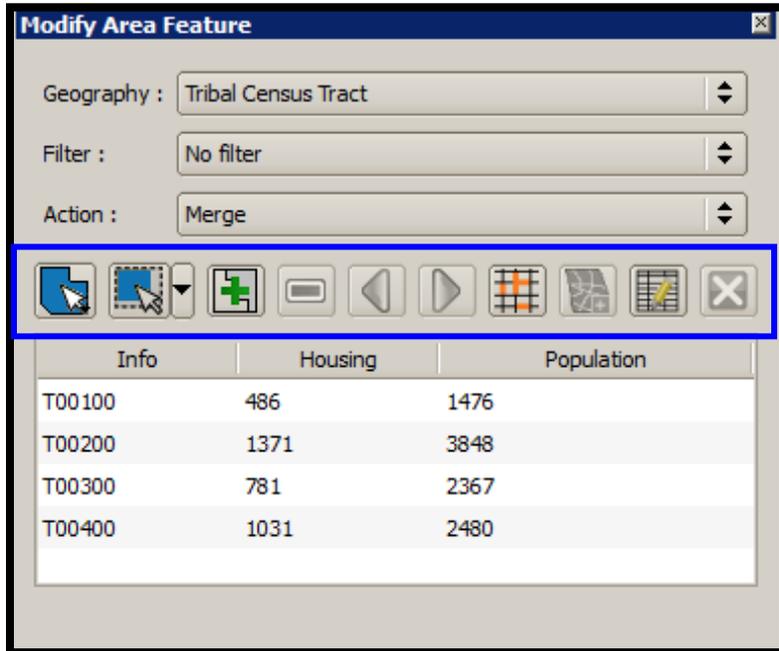


Figure 15. Modify Area Feature Buttons: Tribal Census Tract – Merge

Table 20: Modify Area Feature Buttons Detail

Button	Name	Function/Description
	Select Target Area	Allows the participant to select the geographic area (selected from the Geography drop-down menu) by clicking on the map.
	Select Features	Allows the participant to select/deselect layer features in the map window with a single click, dragging the cursor, or drawing graphics on the screen.
	Merge	Select Merge from the Action drop-down menu to activate this button. The Merge button combines multiple geographic entities. Note: Be aware this button is very similar in appearance to the Add Area button activated by the Boundary Change Action selection.

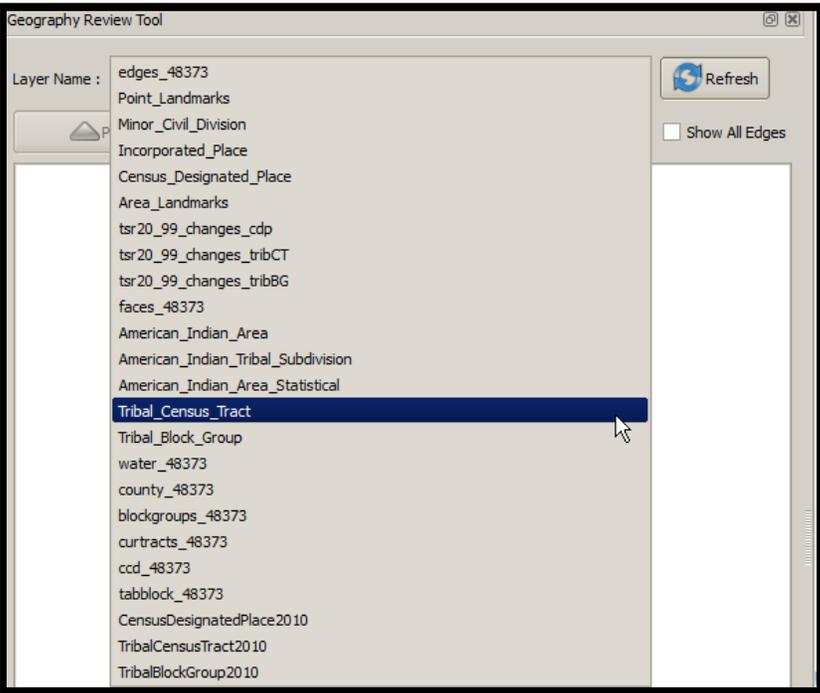
Button	Name	Function/Description
	Add Area	<p>Select Boundary Change from the Action drop-down menu to activate this button. The Add Area button adds smaller geographic entities (faces or block groups) to the geographic area selected on the map. To add more than one face, click on the first face, hold down the Ctrl key, and continue clicking on the other faces until complete.</p> <p>Note: Be aware this button is very similar in appearance to the Merge button activated by the Merge Action selection. Locate the definition of faces in Appendix A.</p>
	Split by Block Group or Split by Face (Tribal Census Tract) and Split (Tribal Block Group)	<p>Once selected, the selected geographic entity is split by the entire block group or individual faces of the geographic area selected on the map.</p> <p>Note: Be aware this button activates in both the Tribal Census Tract and Tribal Block Group geography drop-down menus. With Tribal Census Tract geography chosen, select Split by Block Group or Split by Face from the Action drop-down menu to activate this button. From Tribal Block Group geography, select Split from the Action drop-down menu.</p>
	Remove Area	<p>Select Boundary Change from the Action drop-down menu. Remove smaller geographic entities (Face and Block Group) from the geographic entity selected on the map by using this button. This button only activates for CDPs.</p>
	Previous Non-contiguous Area	<p>Button activates if the selected statistical geographic area is not contiguous and provides a means to pan back to each noncontiguous piece.</p>
	Next Non-contiguous Area	<p>Button activates if the selected statistical geographic area is not contiguous and provides a means to pan forward to each noncontiguous piece.</p>
	Show / Hide Boundary Eligibility Theme	<p>Displays the features on the map that have questionable boundaries (dashed yellow line) and not acceptable boundaries (dashed red line).</p>
	Add Entity	<p>Select New District from the Action drop-down menu of the Geography drop-down menu for CDPs. Add select faces to create a new geographic entity.</p>

Button	Name	Function/Description
	Change Attributes	Edit attributes of a selected geography. For tribal census tracts, a participant may edit the Tribal Tract Code (TTRACTCE). For tribal block groups, a participant can edit the Tribal Block Group Code (TBLKGRPCE).
	Delete Area Feature	Select Boundary Change from the Action drop-down menu. The Delete Area Feature button deletes an area feature. This is used only for CDPs.

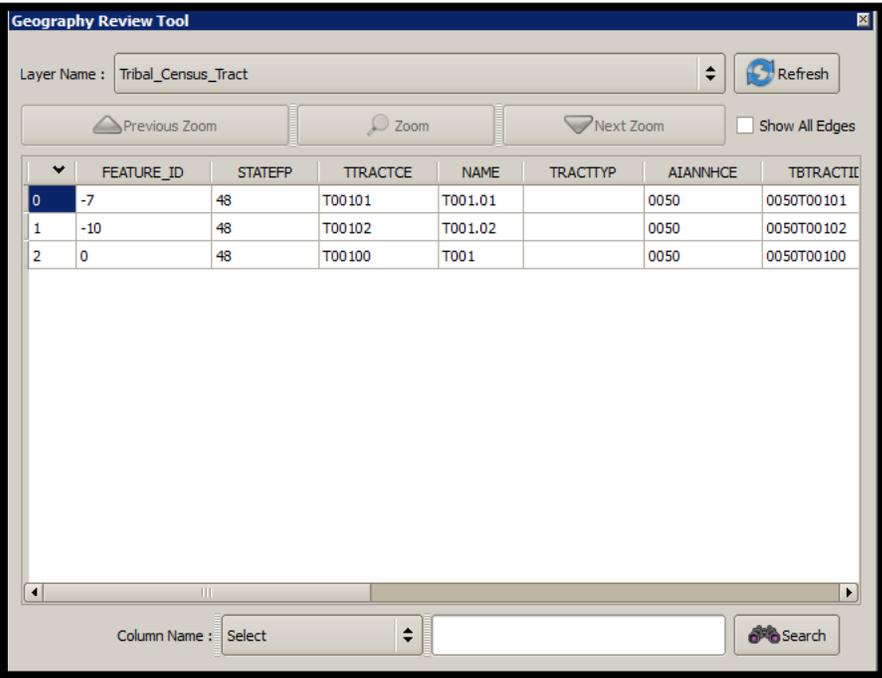
7.4.2.2 Geography Review Tool Button

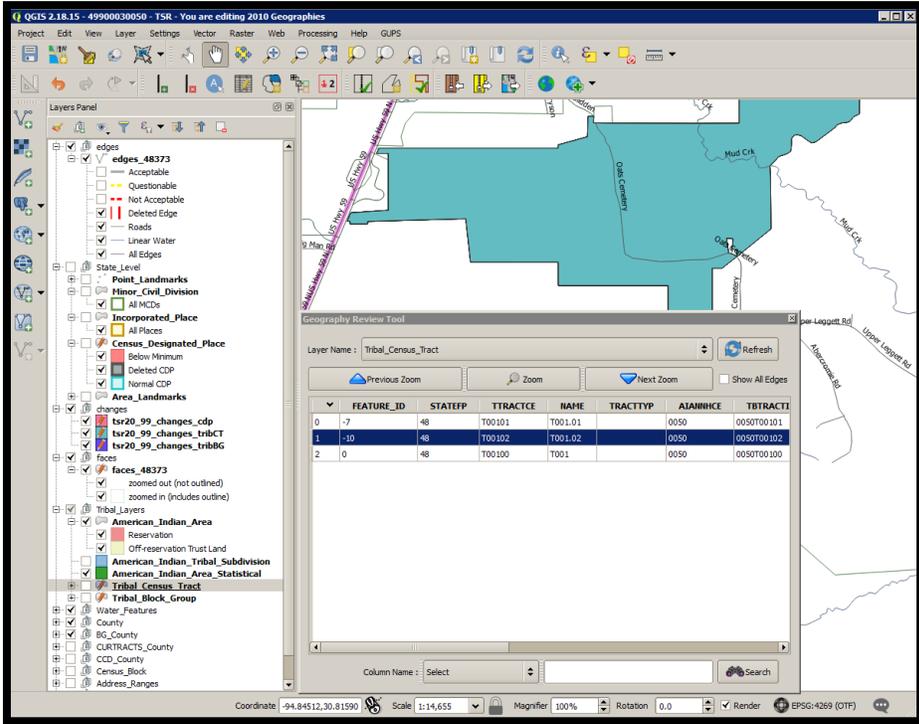
The **Geography Review Tool** button provides access to the attribute tables of some of the layers displayed in the Table of Contents. The layers of interest for PSAP are the tribal census tracts, tribal block groups, and CDPs. This tool filters map layers based on field values in the attribute table. It provides an overall review of the new or deleted entities, or the entities with boundary changes. [Section 8.1](#) discusses that process while [Table 21](#) includes information for executing this button. [Section 9.3](#) provides detailed information and examples.

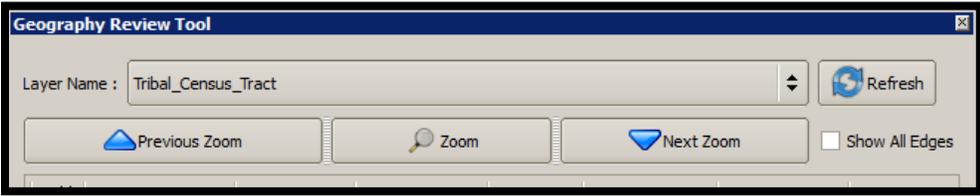
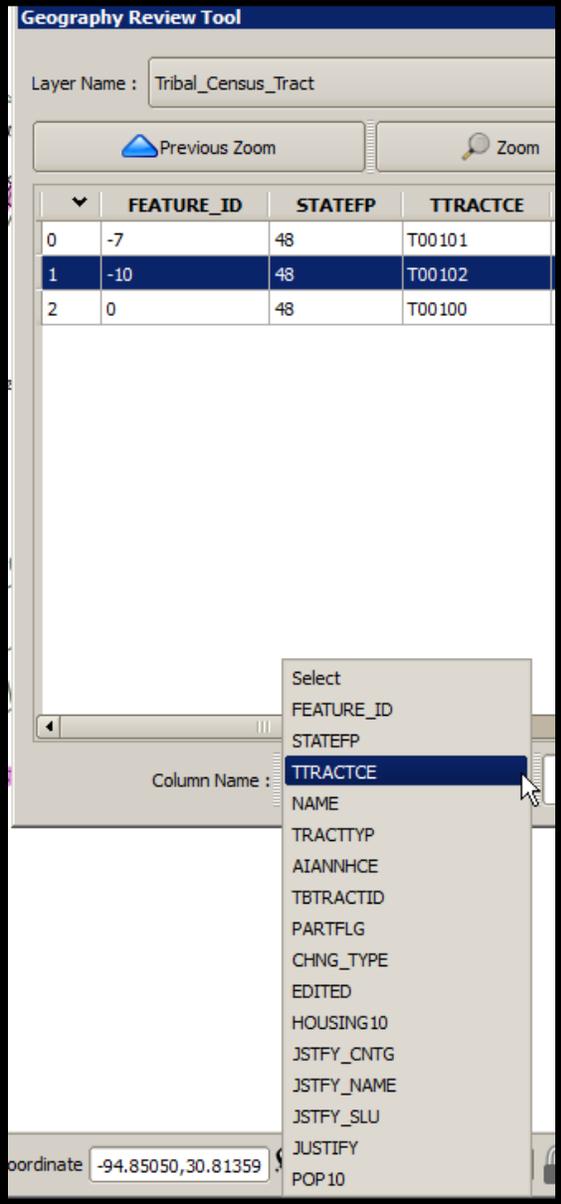
Table 21: Geography Review Tool Button

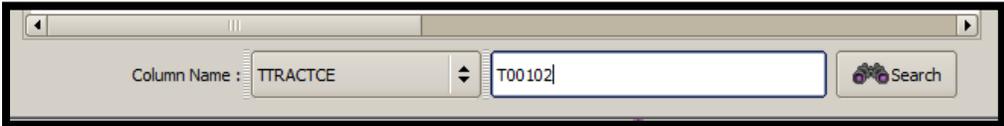
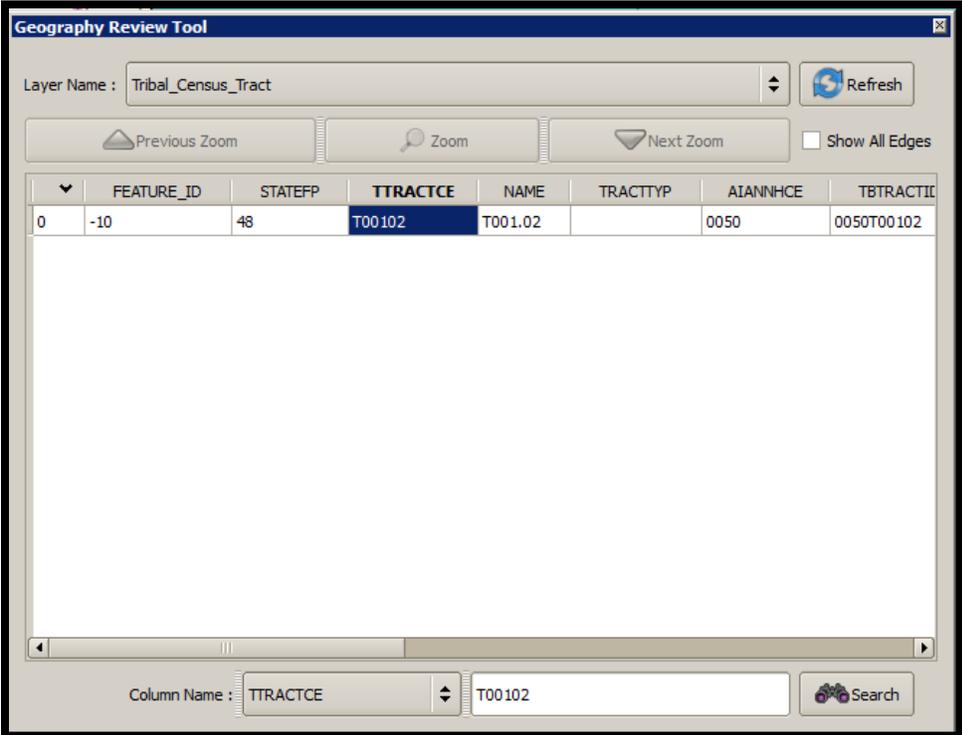
Step	Action and Result
Step 1	<p>Click the Geography Review Tool button.</p>  <p><i>The Geography Review Tool window opens.</i></p>
Step 2	<p>Select the layer to review from the Layer Name drop-down menu.</p> 

Step	Action and Result
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Step 3	<p>After making layer selection, the attribute table for the layer opens, with the attributes for each of the tribal census tracts.</p>  <table border="1" data-bbox="467 436 1307 556"> <thead> <tr> <th>FEATURE_ID</th> <th>STATEFP</th> <th>TTRACTCE</th> <th>NAME</th> <th>TRACTTYP</th> <th>AIANNHCE</th> <th>TBTRACTII</th> </tr> </thead> <tbody> <tr style="background-color: #e0e0e0;"> <td>0</td> <td>-7</td> <td>48</td> <td>T00101</td> <td>T001.01</td> <td>0050</td> <td>0050T00101</td> </tr> <tr> <td>1</td> <td>-10</td> <td>48</td> <td>T00102</td> <td>T001.02</td> <td>0050</td> <td>0050T00102</td> </tr> <tr> <td>2</td> <td>0</td> <td>48</td> <td>T00100</td> <td>T001</td> <td>0050</td> <td>0050T00100</td> </tr> </tbody> </table>	FEATURE_ID	STATEFP	TTRACTCE	NAME	TRACTTYP	AIANNHCE	TBTRACTII	0	-7	48	T00101	T001.01	0050	0050T00101	1	-10	48	T00102	T001.02	0050	0050T00102	2	0	48	T00100	T001	0050	0050T00100
FEATURE_ID	STATEFP	TTRACTCE	NAME	TRACTTYP	AIANNHCE	TBTRACTII																							
0	-7	48	T00101	T001.01	0050	0050T00101																							
1	-10	48	T00102	T001.02	0050	0050T00102																							
2	0	48	T00100	T001	0050	0050T00100																							

Step 4	<p>To see a census tract on the map, click its row in the attribute table list and then click Zoom or double click the row. <i>The map automatically zooms to the selected tribal census tract.</i></p> 
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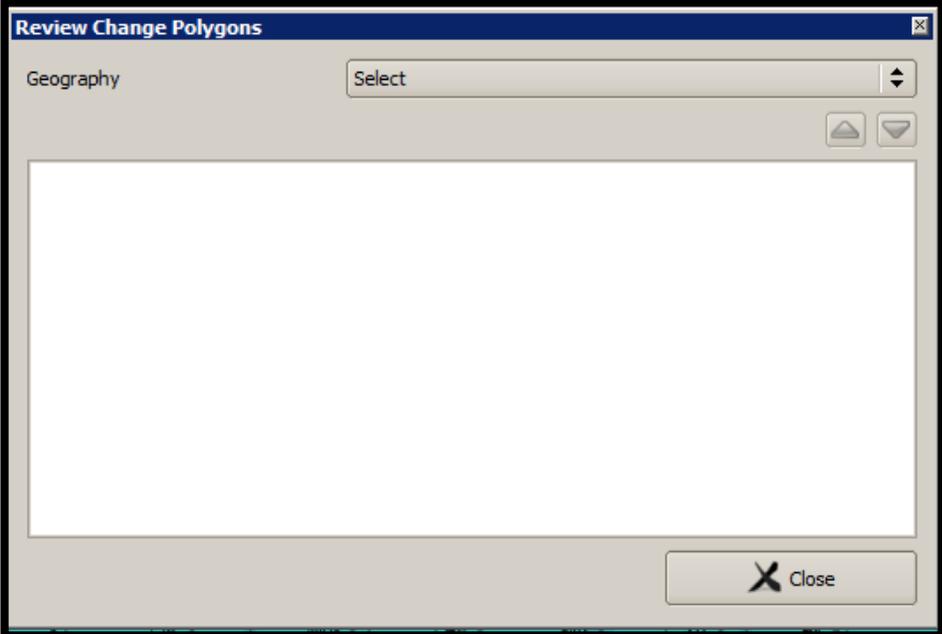
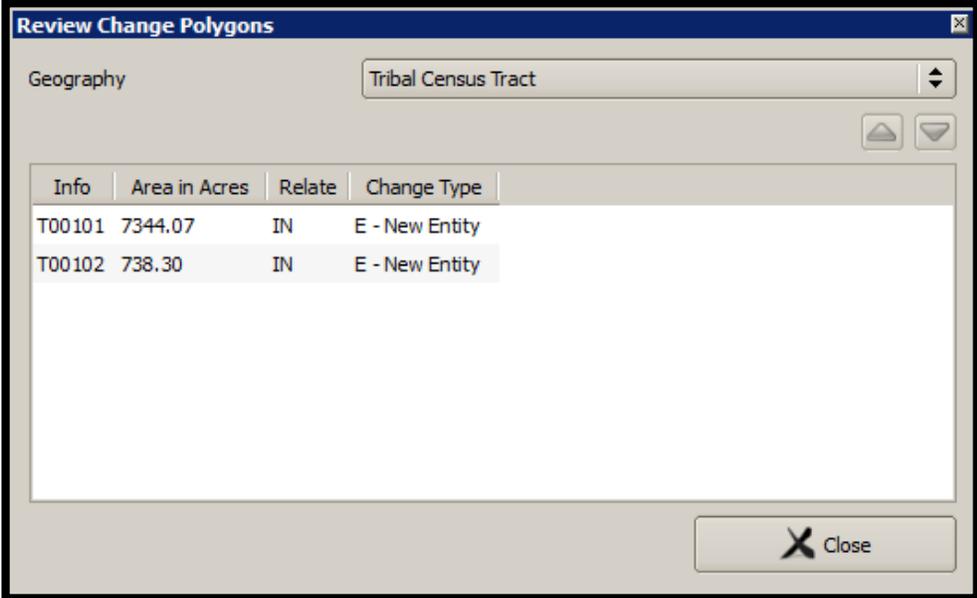
Step	Action and Result																
Step 5	<p>To view other tracts, use the Previous Zoom and Next Zoom buttons. The previous or next row highlights and GUPS zooms to the map for that row.</p> 																
Step 6	<p>Use the Column Name drop-down menu at the bottom of the dialog box to filter the table layers by specific attributes (i.e., TTRACTCE, CHNG_TYPE, etc.). In this example, select TTRACTCE.</p>  <table border="1" data-bbox="646 745 1159 888"> <thead> <tr> <th></th> <th>FEATURE_ID</th> <th>STATEFP</th> <th>TTRACTCE</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>-7</td> <td>48</td> <td>T00101</td> </tr> <tr> <td>1</td> <td>-10</td> <td>48</td> <td>T00102</td> </tr> <tr> <td>2</td> <td>0</td> <td>48</td> <td>T00100</td> </tr> </tbody> </table>		FEATURE_ID	STATEFP	TTRACTCE	0	-7	48	T00101	1	-10	48	T00102	2	0	48	T00100
	FEATURE_ID	STATEFP	TTRACTCE														
0	-7	48	T00101														
1	-10	48	T00102														
2	0	48	T00100														

Step	Action and Result
<p>Step 7</p>	<p>Once TTRACTCE displays in the Column Name field, type in the tribal census tract code in the Search box and then click on the Search button.</p>  <p>This filters the attribute table to display just the one tract.</p> 
<p>Step 8</p>	<p>Selecting the one tract from the attribute table activates the Zoom menu that allows for quick zoom to the selected tract. Clicking the Refresh button restores the attribute table to display all records for the chosen layer name.</p>

7.4.2.3 Review Change Polygons Button

The **Review Change Polygons** button reviews transaction, or change, polygons for tribal census tracts, tribal block groups, and CDPs. This tool may be helpful for participants to use as part of their quality check of the work they performed to modify the statistical geographies. The execution of this tool is not required to make a submission to the Census Bureau. Information for executing this button are in [Table 22](#), while [Section 9.2](#) provides detailed information and examples.

Table 22: Review Change Polygons Button

Step	Action and Result												
<p>Step 1</p>	<p>Click the Review Change Polygons button.</p> 												
<p>Step 2</p>	<p>The Review Change Polygons window appears.</p> 												
<p>Step 3</p>	<p>Choose the statistical geography to review from the Geography drop-down menu, <i>in this example Tribal Census Tract</i>.</p>  <table border="1" data-bbox="422 1373 889 1493"> <thead> <tr> <th>Info</th> <th>Area in Acres</th> <th>Relate</th> <th>Change Type</th> </tr> </thead> <tbody> <tr> <td>T00101</td> <td>7344.07</td> <td>IN</td> <td>E - New Entity</td> </tr> <tr> <td>T00102</td> <td>738.30</td> <td>IN</td> <td>E - New Entity</td> </tr> </tbody> </table> <p>The Review Change Polygons window populates with the geographies to review.</p>	Info	Area in Acres	Relate	Change Type	T00101	7344.07	IN	E - New Entity	T00102	738.30	IN	E - New Entity
Info	Area in Acres	Relate	Change Type										
T00101	7344.07	IN	E - New Entity										
T00102	738.30	IN	E - New Entity										

Step **Action and Result**

Step 4 Click on a row in the list. *The **Map View** zooms to the selected entity.*

Step 5 To correct a change, activate the **Modify Area Feature** tool and click on the **Select Target Area** button to highlight the geography to edit. Dependent on the type of geography selected, the **Action** menus; and therefore the update update potential, vary.

Info	Housing	Population
T00101	239	606
T00102	0	0

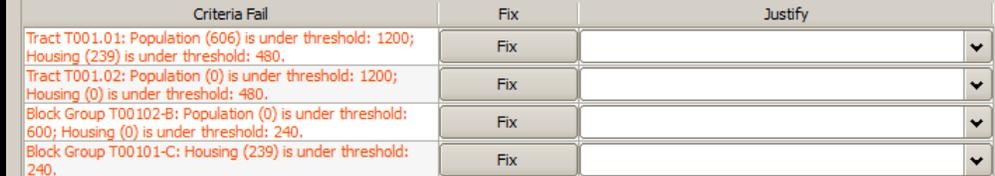
Housing : 0 Population : 0

Note: These edits modify the entity selected in the Table of Contents, not the specific change polygon. The change polygon simply provides a record of the action(s) taken on each entity and is not editable.

7.4.2.4 TSR Criteria Review Button

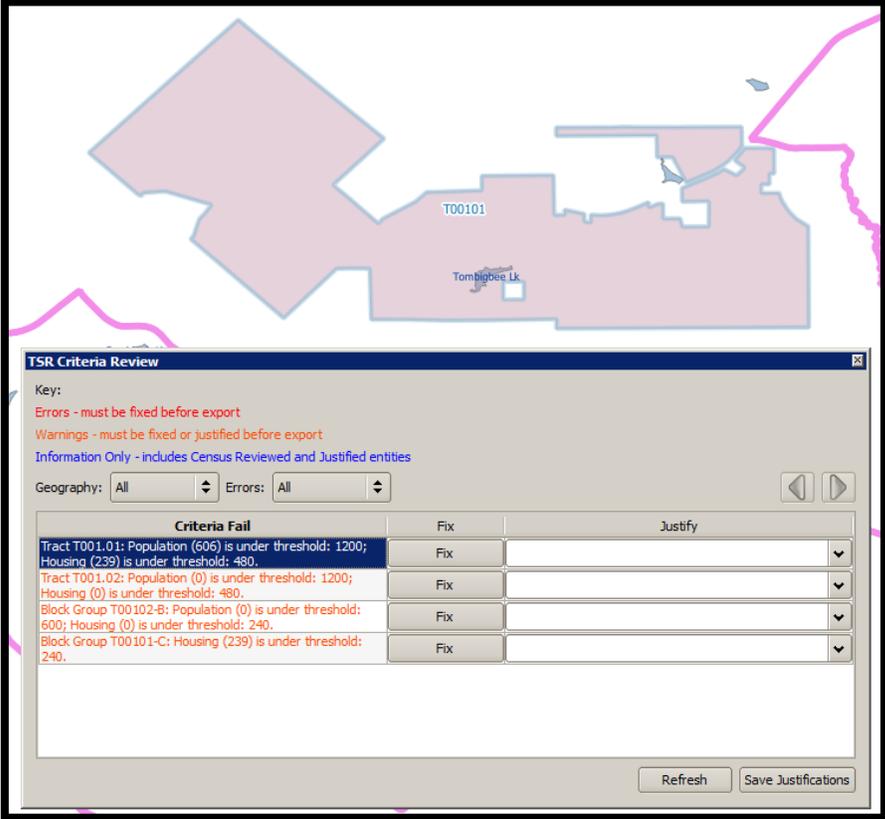
Click the **TSR Criteria Review** button to generate a list of threshold failures and correct the failures or provide a justification for the failure. Participants must run this required check before creating a data output file for submission to the Census Bureau. **Table 23** includes information for executing this button. **Section 9.1** provides detailed information and examples.

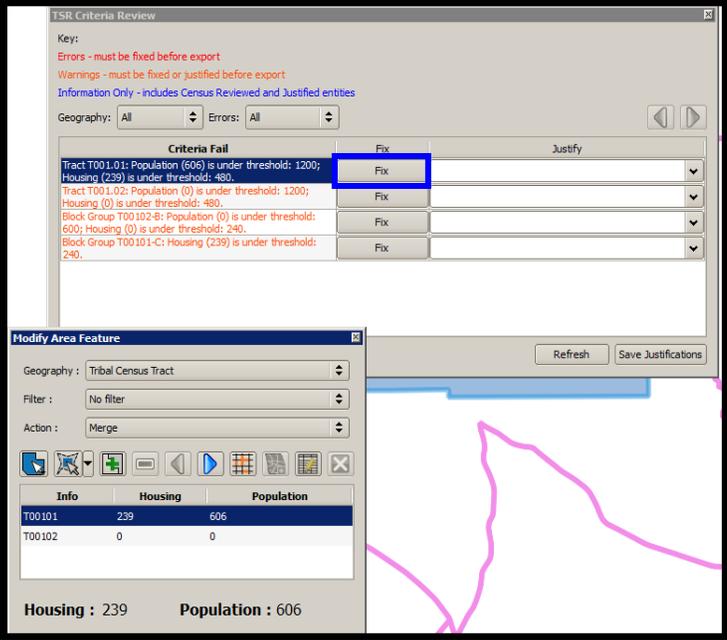
Table 23: TSR Criteria Review Button

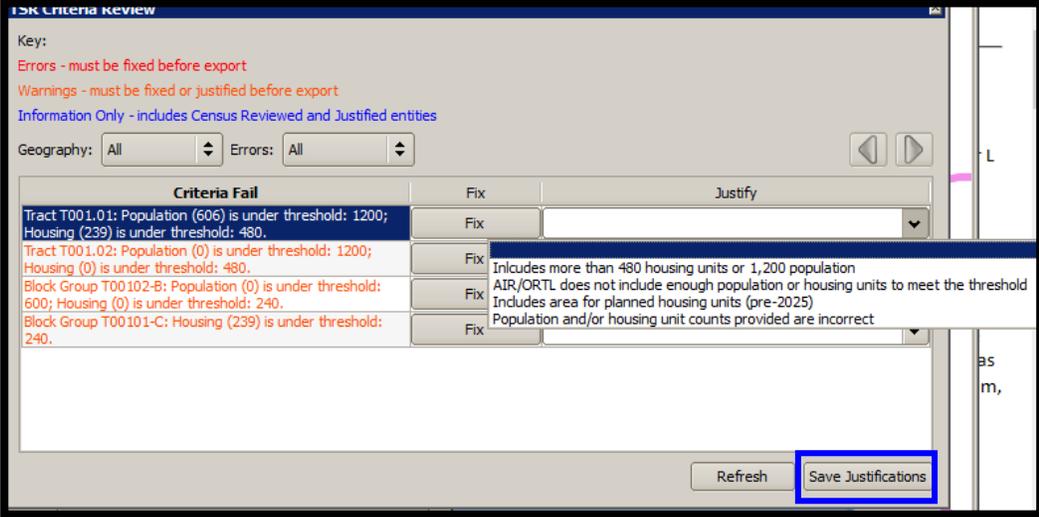
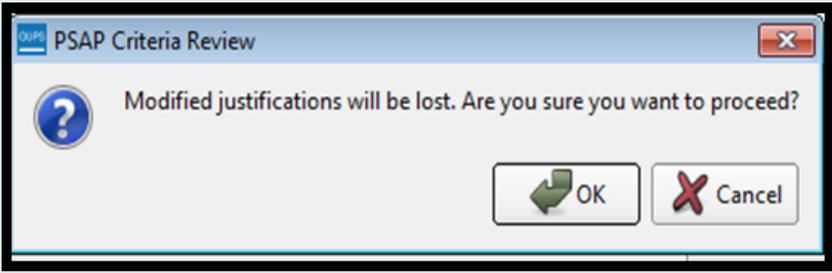
Step	Action and Result															
<p>Step 1</p>	<p>Click the TSR Criteria Review button.</p>  <p>After the TSR Criteria Review completes, a comprehensive list of the failed entities (i.e., those entities that do not meet the established population and housing unit criteria) generates. The errors to fix appear in red color while the warnings to fix or justify appear in orange.</p>  <thead> <tr> <th>Criteria Fail</th> <th>Fix</th> <th>Justify</th> </tr> </thead> <tbody> <tr> <td>Tract T001.01: Population (606) is under threshold: 1200; Housing (239) is under threshold: 480.</td> <td>Fix</td> <td></td> </tr> <tr> <td>Tract T001.02: Population (0) is under threshold: 1200; Housing (0) is under threshold: 480.</td> <td>Fix</td> <td></td> </tr> <tr> <td>Block Group T00102-B: Population (0) is under threshold: 600; Housing (0) is under threshold: 240.</td> <td>Fix</td> <td></td> </tr> <tr> <td>Block Group T00101-C: Housing (239) is under threshold: 240.</td> <td>Fix</td> <td></td> </tr> </tbody>	Criteria Fail	Fix	Justify	Tract T001.01: Population (606) is under threshold: 1200; Housing (239) is under threshold: 480.	Fix		Tract T001.02: Population (0) is under threshold: 1200; Housing (0) is under threshold: 480.	Fix		Block Group T00102-B: Population (0) is under threshold: 600; Housing (0) is under threshold: 240.	Fix		Block Group T00101-C: Housing (239) is under threshold: 240.	Fix	
Criteria Fail	Fix	Justify														
Tract T001.01: Population (606) is under threshold: 1200; Housing (239) is under threshold: 480.	Fix															
Tract T001.02: Population (0) is under threshold: 1200; Housing (0) is under threshold: 480.	Fix															
Block Group T00102-B: Population (0) is under threshold: 600; Housing (0) is under threshold: 240.	Fix															
Block Group T00101-C: Housing (239) is under threshold: 240.	Fix															

| **Step 2** | Select the geography to review from the **Geography** drop-down menu or leave set to **All** to display both geographies at once. This list is dependent on the failing geographies in the tribal entity. Participants can also filter the errors by selecting the error type from the **Errors** drop-down menu. |

Step	Action and Result
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<p>Step 3</p>	<p>Click on an entity in the Criteria Fail list to zoom to that geography on the map.</p> 
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<p>Step 4</p>	<p>Click Fix to open the Modify Area Feature tool. Participants use the actions available in the Modify Feature Area tool to modify and apply changes to the problematic geography or they provide justification for the geography to remain as-is. Note: Clicking the Fix button in the Criteria Fail list selects the same geography in the Modify Area Feature tool.</p> 
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Step	Action and Result
<p>Step 5</p>	<p>Click the Justify drop-down menu to see the default justification choices. If the tribal entity only has one tribal census tract and/or one tribal block group and those geographies fail to meet the criteria thresholds, participants must provide a Justification in GUPS prior to submitting their file to the Census Bureau. The second choice listed below, “AIR/ORL does not include enough population or housing units to meet the threshold,” is likely the recommended justification in those situations. If none of the choices applies, or if justification that is more detailed is available, participants can type their own justification. Character limit is 150.</p>  <p>Click Save Justifications button to save and remove the failure from the list. A save is necessary after each justification.</p>
	<p>Attempting to perform another Fix before saving the justification invokes a confirmation dialog box that warns participants of the loss of information. Click OK to proceed and lose the justification information or click Cancel to return and save the last justification.</p> 
<p>Step 6</p>	<p>Save all changes and execute the TSR Criteria Review tool again to ensure no threshold failures remain without justification.</p>

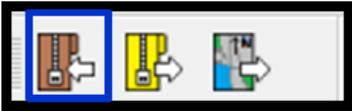
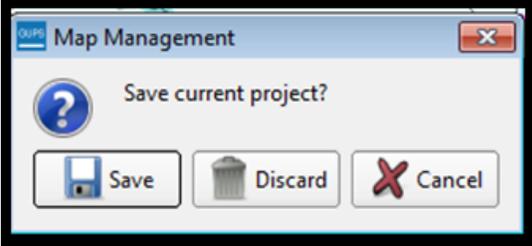
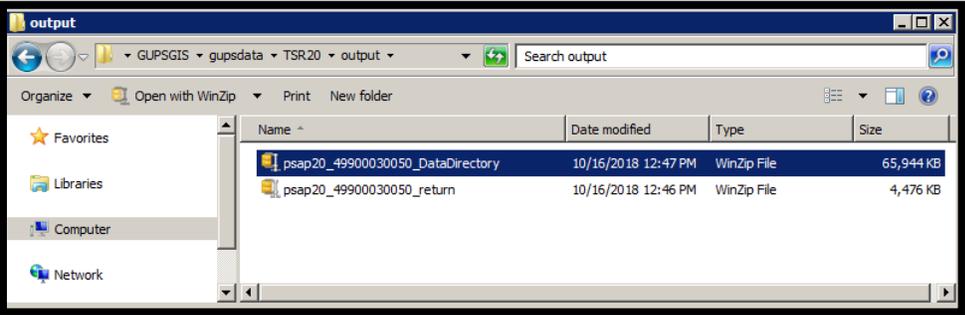
7.4.2.5 Import County Zip Button

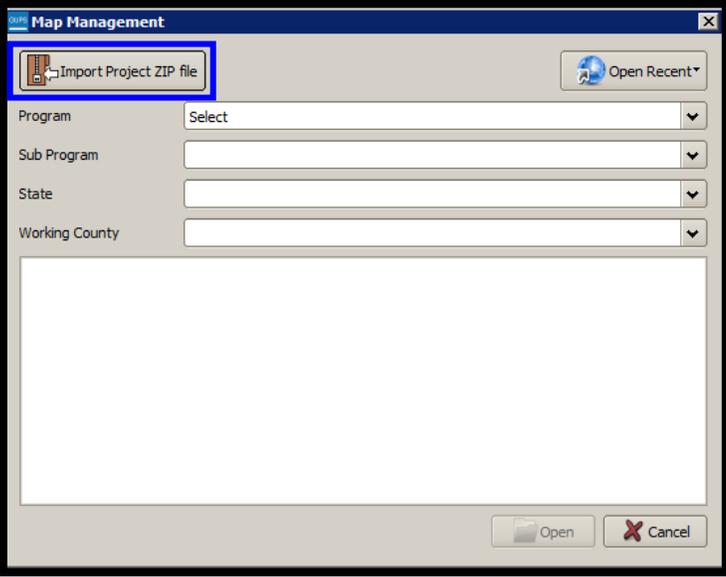
The **Import County Zip** button imports a zipped PSAP project shared by another user. The file exported for sharing with another participant, described in [Section 7.4.2.6](#) is the file imported with this button. The “DataDirectory.zip” file becomes the active tribal entity. This file contains all the layers for the new project and includes the work performed by the other person in the form of “change layers.” Participants use this tool if they intend to have more than one-person review and update the same tribal entity or if the supervisor/manager wants to review all work prior to making a submission to the Census Bureau. The functionality of the **Import Project ZIP file** button mimics the functionality of the information below; it merely presents the start-up

process in a different manner, prior to opening a county. **Table 24** includes information for executing the button from the PSAP toolbar and shows an image of the **Import Project ZIP file** button.

IMPORTANT: Using this tool for a participant’s initial review and update means that work must occur sequentially, not concurrently. Parallel work (i.e., work performed independently by two or more people in the same county) cannot be reconciled in GUPS. As a result, this method of work may not be viable for the initial review and update. A decision on this work method is required prior to beginning work on a county. It likely is most useful for conducting quality checks after the tribal entity is complete, prior to submitting it to the Census Bureau.

Table 24: Import County Zip Button

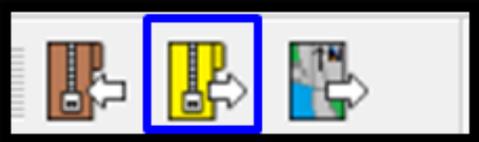
Step	Action and Result
<p>Step 1</p>	<p>Click the Import County Zip button. Because the imported file becomes the active tribal entity, the Census Bureau suggests no project be open within GUPS.</p> 
<p>Step 2</p>	<p>If a project is open, a Map Management dialog box opens to either Save or Discard the current project.</p>  <p>After saving or discarding the project, a file explorer window appears allowing participants to navigate to the “output” directory where the .zip file to import is stored.</p>  <p>This is the file created by using the Export to Zip button, Share with Another Participant choice. After importing, participants are able to see the work performed by the previous reviewer and can begin their review and update.</p>

Step	Action and Result
	<p data-bbox="358 199 1300 226">This image depicts the Import Project ZIP file button in the Map Management window.</p>  <p data-bbox="358 835 1414 987">As mentioned in the introductory portion of this section, this button mimics the Import County Zip button functionality on the PSAP toolbar. It is available upon initial start-up of a GUPS session. This is the best way to import the shared .zip file rather than using the Import County Zip button from within a tribal entity. Opening by this manner eliminates the Save/Discard window that appears in Step 2.</p>

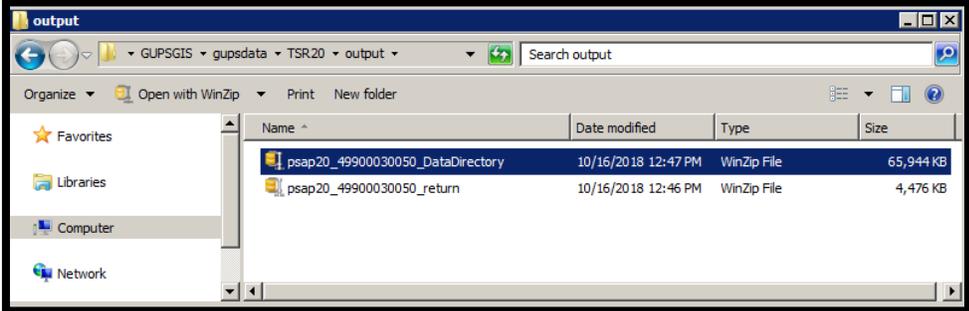
7.4.2.6 Export to Zip Button

The **Export to Zip** button creates a .zip file containing all the required data and shapefiles for submission to the Census Bureau or to share with other reviewers. Participants that intend to make any change to the 2010 geographies must use this button to create the zip file for submission or for sharing. [Table 25](#) includes information for executing this button. [Section 9.4](#) repeats much of the same information in [Table 23](#), but serves to provide closure to the review and update process at the end of the documentation.

Table 25: Export to Zip Button

Step	Action and Result
Step 1	<p data-bbox="358 1392 688 1419">Click the Export to Zip button.</p> 

Step	Action and Result
<p>Step 2</p>	<p>A Select Output Type dialog box opens with two options: Export for Census and Share with Another Participant.</p> <div data-bbox="597 275 1157 684" data-label="Image"> </div> <p>To share the final edits/changes with the Census Bureau, choose the Export for Census option. To share with other reviewers, choose Share with Another Participant. The OK button activates upon selection of either choice. The Cancel button activates with the Select Output Type window.</p>
<p>Step 3</p>	<p>A GUPS User Contact Information window opens with the Export for Census option. It requests contact information from the participant. All fields denoted with a red star are required for submission.</p> <div data-bbox="375 947 1382 1304" data-label="Form"> </div>

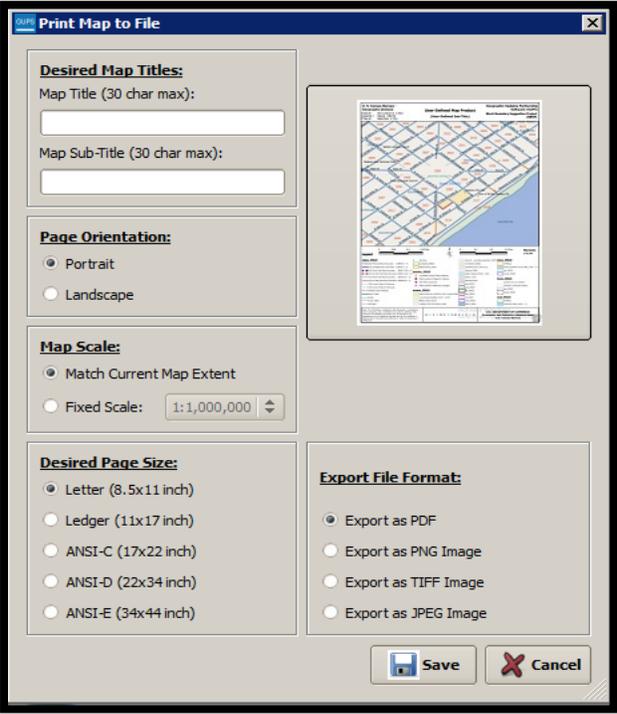
Step	Action and Result
<p>Step 4</p>	<p>Following the completion of the GUPS User Contact Information, the Export to Zip dialog box opens. GUPS generates the .zip file and gives it a name that defines the name of the program (psap20), the tribal entity ID (499000030050), and “return” to differentiate the final zip from the zip created for sharing. GUPS automatically saves all exported data within the .zip file in the output directory (e.g., C:\GUPSGIS\gupsdata\TSR20\output)</p> <p>For participants choosing to Share with Another Participant, GUPS generates a .zip file, stores it in the output directory, and gives it a name similar to the Export for Census file, but uses “DataDirectory” rather than “return.” All of the project files necessary for GUPS to operate correctly bundle together as a result of using this option, while the ‘Export to Census’ bundles only a few layers necessary for processing. Participants must decide early whether they wish to use this functionality, as it does not allow for a concurrent review of a tribal entity. Two or more people cannot conduct independent reviews of the tribal entity because their parallel work cannot be reconciled within GUPS.</p> 

7.4.2.7 Print Map to File Button

The **Print Map to File** button exports and saves a printable map in .pdf, .png, .tif, or jpeg format. [Table 26](#) includes information for executing this button.

Table 26: Print Map to File Button

Step	Action and Result
<p>Step 1</p>	<p>Click the Print Map to File button</p> 

Step	Action and Result
Step 2	<p>The <i>Print Map to File</i> dialog box opens.</p>  <p>Enter the Map Title and Map Sub-Title under Desired Map Titles: section. Click the radio button for Portrait or Landscape under Page Orientation: section. Set the map scale to Match Current Map Extent or Fixed Scale in the Map Scale: section. Choose the page size in the Desired Page Size: section and the file format in the Export File Format: section. Click Save to create a map or Cancel to close the window.</p> <p>If choose to Save, a <i>Windows Explorer</i> window opens to specify a file name for the exported map. As with the .zip file export described in the previous section, GUPS automatically saves all exported map files in the same output directory (e.g., C:\GUPSGIS\gupsdata\TSR20\output), but participants can change the destination folder to their preference.</p>

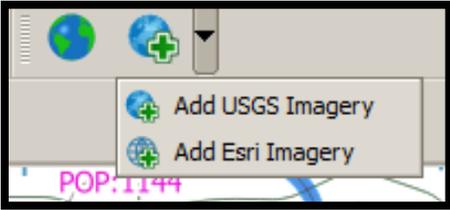
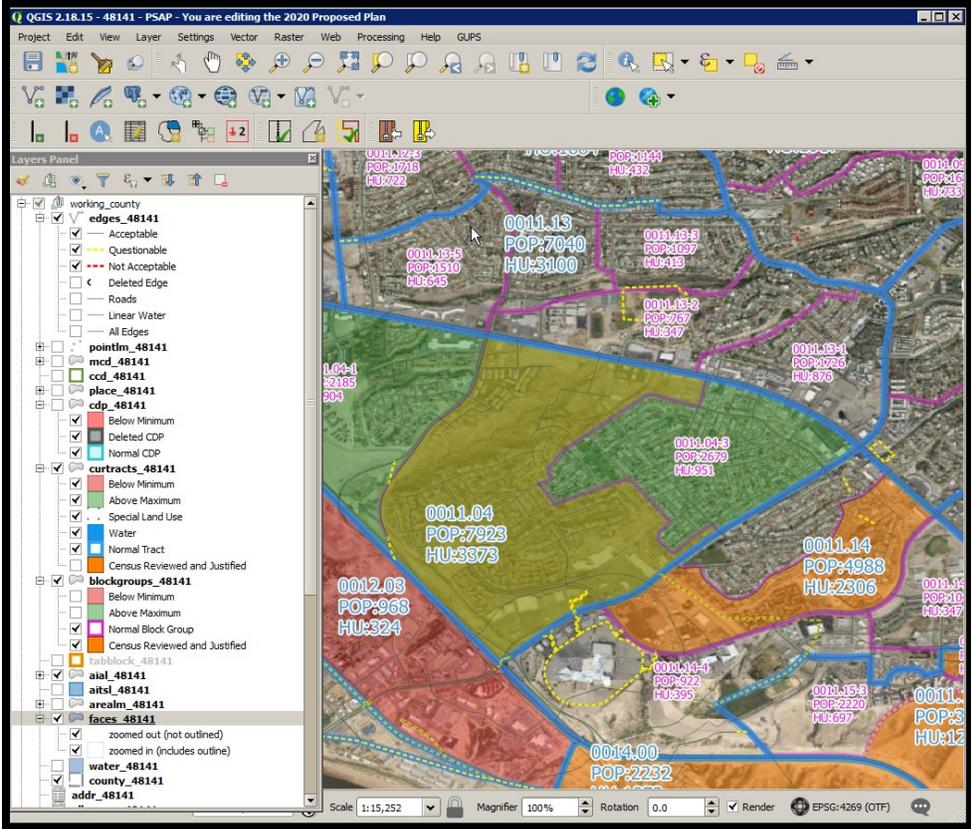
7.4.2.8 Add Imagery Button

The **Add Imagery** button adds imagery to the GUPS map view. An internet connection is required. [Table 27](#) includes information for executing this button.

IMPORTANT: The Census Bureau strongly encourages participants to utilize this tool in order to visualize the boundaries of the statistical geographies and orient participants to the area under review.

Table 27: Add Imagery Button

Step	Action and Result
Step 1	 <p>Click the Add Imagery button.</p>

Step	Action and Result
Step 2	<p>Participants choose to add USGS or Esri imagery.</p> 
Step 3	<p>After selecting imagery, it appears in the Map View beneath the displayed geographies.</p>  <p>Note: The Census Bureau requests the use of imagery in order to provide the visual reference necessary to orient participants and to initiate any changes to the statistical geographies.</p>

7.4.3 Manage Layers Toolbar

The **Manage Layers toolbar**, shown below in [Figure 16](#), supplements the **Add Imagery** button within the **PSAP toolbar**. It offers additional QGIS functionality that allows participants to import their own imagery, geodatabase, web mapping service, or other data layers into the GUPS. [Table 28](#) describes these buttons, but for exact detail on the functionality refer to the QGIS website provided in [Part 2](#).



Figure 16. Manage Layers Toolbar

Table 28: Manage Layers Toolbar Buttons, Names, and Functions/Descriptions

Button	Name	Function / Description
	Add Vector Layer	Click the Add Vector Layer button to add shapefile and geodatabase files to the GUPS project.
	Add Raster Layer	Click the Add Raster Layer button to add raster datasets such as imagery to the GUPS project.
	Add SpatialLite Layer	Click the Add SpatialLite Layer button to add data from a SpatialLite database.
	Add PostGIS Layers	Click the Add PostGIS Layers button to add data from a PostGIS layer, a MSSQL spatial layer, a DB2 spatial layer, or an Oracle spatial layer.
	Add WMS/WMTS Layer	Click the Add WMS/WMTS Layer button to add data from Web Mapping Services (WMS), Web Mapping Tile Services (WMTS), or from ArcGIS MapServer. GUPS supports publicly accessible and secured map services.
	Add WCS Layer	Click the Add WCS Layer button to add data from Web Coverage Services, which provide access to raster data useful for client-side map rendering.
	Add WFS Layer	Click the Add WFS Layer button to add data from Web Feature Services or from ArcGIS FeatureServer.
	Add/Edit Virtual Layer	Click the Add/Edit Virtual Layer button to add or edit a virtual layer. It is not needed for PSAP.
	New Shapefile Layer	Click the New Shapefile Layer button to create a new shapefile layer or new temporary scratch layer. This button is inactive and not useful for PSAP.

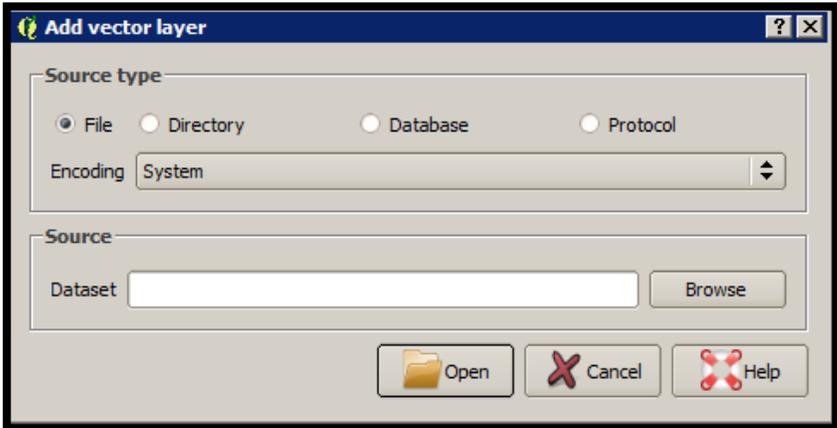
GUPS supports vector data in a number of formats, including those supported by the OGR library data provider plugin, such as Esri shapefiles, MapInfo MIF (interchange format), and MapInfo TAB (native format). It also supports PostGIS layers in a PostgreSQL database and SpatialLite layers. Additional data provider plugins provide the support for additional data types (e.g., delimited text).

Participants may only upload one participant-provided data layer at a time. Participants with multiple data layers to upload must work with one and close it before loading another. Below are the steps to import the most commonly used data formats.

7.4.3.1 Add Vector Layer Button

The **Add Vector Layer** button described in [Table 29](#) allows participants to add shapefile or geodatabase data layers.

Table 29: Add Vector Layer Button

Step	Action and Result
<p>Step 1</p>	<p>Click the Add Vector Layer button on the Manage Layers toolbar.</p>  <p>The Add Vector Layer dialog box opens.</p> 
<p>Step 2</p>	<p>In the Encoding drop-down menu, the default value is System. If receive an error message, use the drop-down to select UTF-8.</p>
<p>Step 3</p>	<p>Click the Browse button in the Source section to navigate to the folder and locate the shapefile or geodatabase to select. Click the filename to populate the Dataset field.</p>
<p>Step 4</p>	<p>Click the Open button to add the shapefile/geodatabase to the Table of Contents and to the Map View window and Table of Contents.</p>

7.4.3.2 Add WMS/WMTS Layer Button

The **Add WMS/WMTS Layer** button allows participants to load data from a web mapping service, web mapping tile service, or ArcGIS MapServer. [Table 30](#) describes the steps for using the button below.

Table 30: Add WMS/WMTS Layer Button

Step	Action and Result
<p>Step 1</p>	<p>Click the Add WMS/WMTS Layer button on the Manage Layers toolbar. Dependent on the service selected, either the Add Layer(s) from a WM(T)S Server or the Add ArcGIS MapServer Layer dialog box opens. This example depicts adding a WMS.</p>
<p>Step 2</p>	<p>Select the WMS to add. Click the Layers tab and click the New button under the tab. The Create a new WMS Connection dialog box opens.</p>
<p>Step 3</p>	<p>In the Name field, type a name for the web mapping imagery service. In the URL field, type (or copy/paste) the URL for the service. If the service requires a user name and password, type them in the fields provided. Click OK. The service adds to the drop-down menu for web mapping services appearing just below the Labels tab.</p> <p>Note: If working inside a firewall, the system may prompt for a user name and password to obtain resources from outside the firewall.</p>
<p>Step 4</p>	<p>Select the imagery service from the drop-down menu. The available layers appear in the ID/Name/Title/Abstract box.</p>

Step	Action and Result
Step 5	Click on the layer to display, then click the Add button to add the service to the Table of Contents and to the Map View window. Note: The WMS displays on top of the other layers selected in the Map View , but participants can move it by clicking the WMS layer and, while holding down the mouse button, dragging it to the bottom of the Table of Contents .

If participants do not have access to a web mapping service, have a poor Internet connection, or work under a restrictive firewall, they can still add other types of imagery files to GUPS (e.g., a county or state imagery dataset). The **Add Imagery** button automatically links to the USGS and Esri imagery. [Table 27](#) discusses the use of this button.

7.4.3.3 Add Raster Layer Button

The **Add Raster Layer** button allows participants to add imagery files they may have on their own system. [Table 31](#) covers the few steps necessary to add raster data, i.e., imagery files.

Table 31: Add Raster Layer Button

Step	Action and Result
Step 1	Click the Add Raster Layer button on the Manage Layers toolbar . <i>The Open a GDAL Supported Raster Data Source dialog box opens.</i>
Step 2	Navigate to the folder on the computer (or network) where the imagery file is stored.
Step 3	Select the file and click Open . <i>The file loads into the GUPS.</i>

PART 3 USING GUPS FOR 2020 CENSUS PSAP

This portion of the Respondent Guide includes guidance for the use of GUPS to conduct PSAP review from the 2010 geographies. It provides specific instructions for using the GUPS tools to review and perform updates on the relevant geographies. The methods for reviewing and updating boundaries for tribal census tracts and tribal block groups are the same.

If your tribal entity falls beneath the population and housing unit thresholds to sustain more than one tribal census tract and/or tribal block group, then it is likely there are no updates to provide to the Census Bureau. Please proceed with a review of the tribal statistical geography and CDP boundaries, but once it is determined that no update is necessary, notify the Census Bureau by completing and returning the P-300 postcard that accompanied the delineation materials. Conversely, if updates are certain, complete and return the same postcard notifying the Census Bureau of forthcoming updates.

IMPORTANT: The Census Bureau does not expect a submission from tribal entities that do not make updates to the existing 2010 statistical geographies. Only tribal entities with changes to their statistical geographies need to perform the validation checks and file preparation outlined in Chapters 8 and 9.

The next three chapters cover the following content:

Chapter 8 Review and Update of PSAP Geographies.

- Guidance for the review PSAP geographies.
- Instruction for the update of each of the three tribal PSAP geographies.
 - Tribal census tracts.
 - Tribal block groups.
 - Census designated places (CDPs).

Chapter 9 Instructions for using the GUPS review tools to validate data.

- TSR Criteria Review Tool.
- Geography Review Tool.
- Review Change Polygons Tool.
- Instructions to prepare files for submission.
 - Export .zip files to share.
 - Export .zip files to submit.

Chapter 10 Instructions to establish account.

- Instructions to submit files.

CHAPTER 8. REVIEW AND UPDATE OF PSAP GEOGRAPHIES

The Census Bureau requests participants evaluate land use characteristics and settlement patterns to make informed decisions to resolve any issues with existing statistical geographies. The Census Bureau recommends using two primary datasets within GUPS to perform the PSAP review: the edges layer to determine the type of linear features used for boundaries and aerial imagery to clarify questions on land use and settlement patterns.

A linear feature in the edges layer can be visible, such as a road or a shoreline, or non-visible, such as the legal limits of a city or a parcel property line. Linear features are coded by type in the MAF/TIGER database with an 'MTFCC', a 5-digit alphanumeric string such as 'S1400' (Local Road) or 'H3010' (Stream/River), and are named where applicable (e.g. 'Harley Ave.' or 'Little Bend River'). While review is subjective, normalizing the methods of evaluation and features for consideration help provide a framework for a consistent review and lays the foundation for consistently reviewed geographies.

Mentioned in [Table 27](#), aerial imagery is a background layer that pulls tiles from either the National Agriculture Imagery Program (NAIP) or Esri into the extent of the tribal entity in GUPS. The NAIP dataset originates from the USGS National Map Orthoimagery service. Both USGS and Esri imagery loads dynamically at the viewable scale in the QGIS map canvas. These images are typically one-meter resolution, with some areas having access to sub-foot resolution imagery and a few very remote places (typically interior Alaska) having coarser or even no available imagery. With each pixel in the image corresponding to one square meter of ground surface, determining land use classification through the presence or absence of vegetation, the type and distribution of structures through identification of roofs, and major landmarks such as stadiums is possible. At this resolution, participants are also able to verify placement of visible linear features in the edge layer in most cases.

As important as understanding the GUPS mechanics and the PSAP criteria, the basic concepts of utilizing imagery and understanding the linear features that comprise the statistical geographies is vital to a successful 2020 Census PSAP.

8.1 Review of PSAP Geographies

Tribal participants may begin their review of the 2010 tribal statistical geographies by using the tools and symbology built into GUPS. They may also utilize the Microsoft Excel 2010 population and housing unit counts file (e.g., AIA<AIANNHCE>_2010_Pop_and_Housing_counts.xlsx) provided with the delineation materials outside of the GUPS environment to determine if any of the tribal statistical geographies within their tribal entity fall outside of the criteria thresholds.

The file includes all of the tribal statistical geographies for each tribal entity, so review it closely to identify the tribal census tracts and tribal block groups falling outside of the recommended thresholds. If geographies exist that fail to meet the recommended thresholds, participants conduct their review and update within the **Modify Area Feature** tool. Follow the information provided regarding criteria, guidelines, and boundary requirements within the appropriate chapter in [Part 1](#) (e.g., chapters 2 – 4).

If the tribal entity only includes one tribal census tract and one tribal block group that fall beneath the thresholds, no updates are possible since each tribal entity will have at least one set of tribal statistical geographies regardless of their population and housing unit counts. Participants with only one tribal census tract and one tribal block group, and those without threshold failures are encouraged to utilize GUPS, the paper maps, or the Adobe .pdf files to review the existing boundaries of the statistical geographies. After completing a review and confirming no updates are required, complete the delineation phase postcard (P-300) and return it to the Census Bureau denoting no changes are forthcoming. Doing so concludes the delineation phase participation.

Participants with a tribal entity large enough to contain more than one tribal census tract and tribal block group must resolve all threshold failures that exist within the tribal entity, or must provide justifications for not correcting the failures. Clearing the thresholds failures (above maximum thresholds and below minimum thresholds of each of the statistical geographies) is the minimum required to participate in PSAP. If time permits, a review of all of the statistical geographies is encouraged as a form of validation of the existing statistical geographies.

To begin a review of the 2010 geographies, the Census Bureau suggests participants use the **Modify Area Feature** tool, described in [Section 8.2.1](#), to review and update the statistical geographies that do not meet the required thresholds (whether population and/or housing).

- Begin the review with tribal census tracts. Review and update the failures that are above the criteria thresholds and then those that are below thresholds. Conduct the same review for the tribal block groups, and finish with a review and update the CDPs, if applicable to the tribal area.
- Time permitting, review the boundaries of the statistical geographies.
- Execute the same three validation tools described in [Section 7.4.2](#) and detailed in [Chapter 9](#) the **TSR Criteria Review** tool, the **Review Change Polygons** tool, and the **Geography Review Tool**.
- Once satisfied with the geographies, export the files for submission to the Census Bureau.

[Section 8.2](#) details the various steps necessary for updating the three tribal statistical geographies.

8.2 Update of PSAP Geographies

Although this section of the guide focuses on updating statistical geographies to meet criteria thresholds, there are some scenarios where it is better to maintain the existing geography regardless of any changes that may have occurred since the last decennial census. Some situations where this may be appropriate include the following:

- Areas of historical significance.
- Areas of seasonal or vacation housing (usually with skewed population and housing ratios).
- Underlying problem with legal boundaries used as statistical boundaries.

8.2.1 Modify Area Feature Tool

The **Modify Area Feature** tool introduced in [Section 7.4.2.1](#) enables participants to apply a search filter to each PSAP geography to locate the entities that do not meet specified criteria such as below minimum, above maximum, water, special land use, and AIR/ORTL/Hawaiian Home Lands (HHL). It enables participants to perform specified actions such as merge, boundary change and split to entities to meet criteria and thresholds.

IMPORTANT: The Modify Area Feature tool is the main tool participants use to make changes to the statistical geographies. All of the upcoming sections in this chapter reference use of this tool.

Table 32 summarizes the different actions that the GUPS participant will be able to apply to each of the geographies as well as the filter options and definitions of the population and housing unit criteria.

Table 32: Modify Area Feature Actions by Statistical Geography

Geography	Action	Filter Options	Population and Housing Unit Criteria	Change Types
Tribal census tract	Merge, Boundary Change, Split by Block Group, Split by Face, and Change Attributes.	No filter, Below Minimum, Above Maximum, Water, Special Land Use	Census tract is BELOW the minimum population (<1,200) OR housing unit (< 480) threshold. Census tract is ABOVE the maximum population (> 8,000) or housing unit (> 3,200) threshold.	M for Merge, B for Boundary Change, E for Split, and G for Attribute Change. These codes manifest most notably in the Review Change Polygons tool.
Tribal block group	Merge, Boundary Change, Split, and Change Attributes.	No filter, Below Minimum, Above Maximum	Block group is BELOW the minimum population (<600) OR housing unit (< 240) threshold. Block group is ABOVE the maximum population (> 3,000) or housing unit (> 1,200) threshold.	M for Merge, B for Boundary Change, E for Split, and G for Attribute Change. These codes manifest most notably in the Review Change Polygons tool.
Census designated place (CDP)	Boundary Change, New District, and Change Attributes.	No filter, Below Minimum	None, but must contain some population, housing units, or both.	B for Boundary Change, E for New District (CDP), G for Attribute Change, and X for Deleted CDP. These codes manifest most notably in the Review Change Polygons tool.

Note: The **Change Attributes** choice is not within the **Action** drop-down menu, but appears within the **Modify Area Feature** tool window above the **Information** section after a participant selects the **Geography** and **Action**.

8.3 Tribal Census Tract Update Instructions

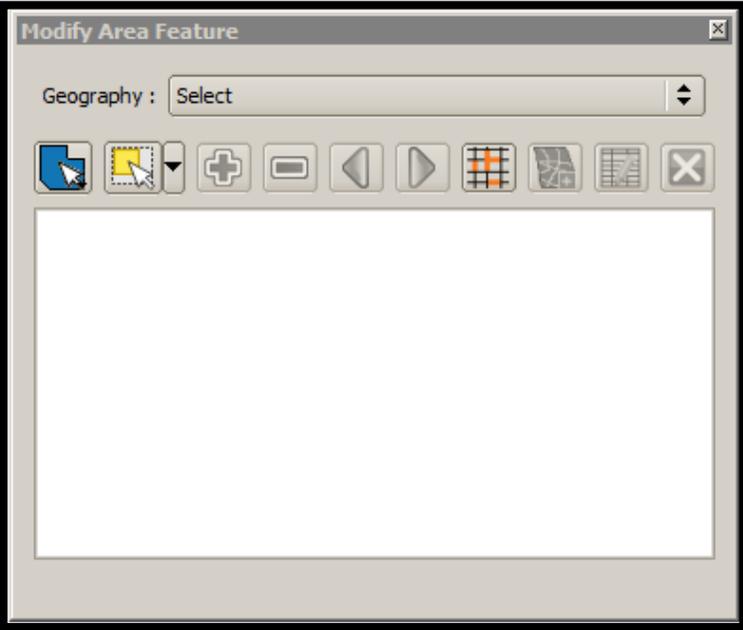
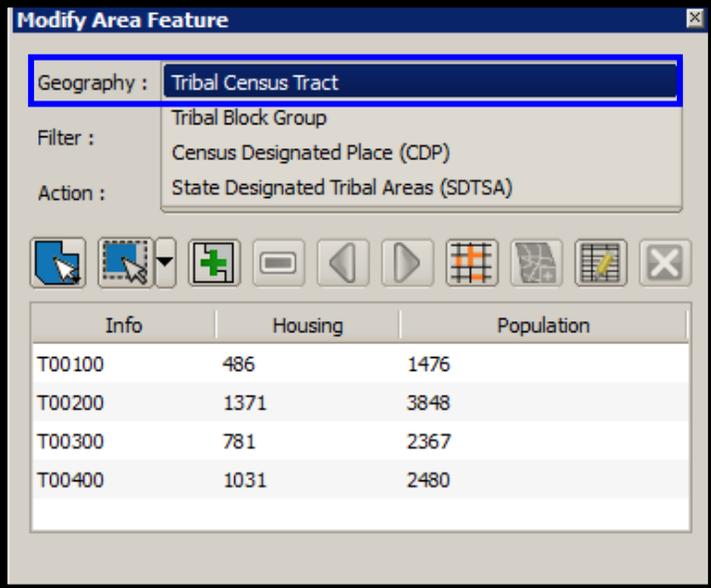
For 2020 Census PSAP, participants can split tribal census tracts, either by using entire tribal block groups or by using individual faces (areas). They can merge tribal census tracts and change tribal census tract boundaries, where the boundary has become errant. The external boundary of tribal census tracts must remain concurrent with the boundary of the tribal entity.

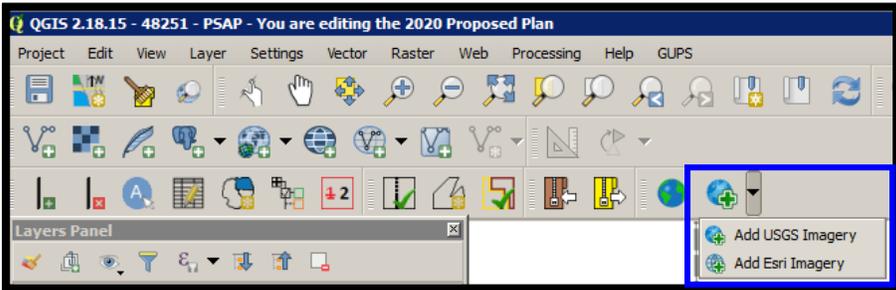
8.3.1 Select Tribal Census Tracts

Participants can change and modify tribal census tracts, which modifies block groups automatically. Steps to select census tracts are included in [Table 33](#).

Table 33: Select Tribal Census Tract

Step	Action and Result
Step 1	Download and review the data as described in Section 6.2, Open GUPS and Start a New Project .
Step 2	<p>Once loaded, GUPS displays all the data layers on the Map View formatted with color, style and labels. For this example, the “Tribal_Census_Tract” is the tribal census tract layer, has two different categories: Below or Above Threshold (both based on the total population and number of housing units) and Normal Tribal Census Tract.</p> <div data-bbox="583 583 1216 984" data-label="Image"> </div> <p>GUPS uses assorted colors to classify the tribal census tracts (and tribal block groups) by housing units and population counts.</p> <p>The entities grouped within the Below or Above Threshold category require local knowledge of the land use, housing units’ type and population characteristics. Participants are required to further review and either apply the necessary actions to change entities using the Census requirements and guidelines. If no action is applied, participants must provide a Justification to maintain the entity.</p>
Step 3	<p>Click the Modify Area Feature button to start editing the layers within the selected county.</p> <div data-bbox="513 1339 1284 1457" data-label="Image"> </div>

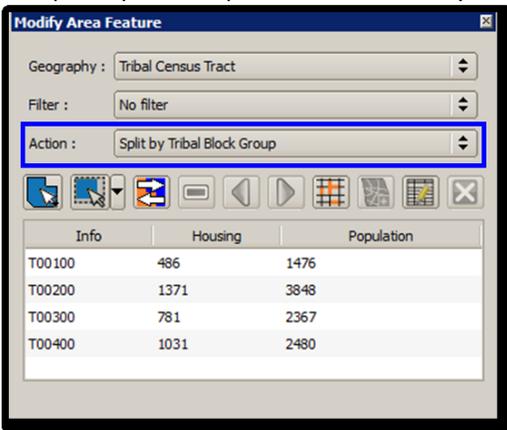
Step	Action and Result															
<p>Step 4</p>	<p>The Modify Area Feature dialog box displays in the center of the screen.</p>  <p>The Census Bureau suggests participants move the Modify Area Feature window to the upper left corner of the Map View. Moving the window allows the participant to have a full view of the map.</p>															
<p>Step 5</p>	<p>Within the Modify Area Feature window, click the Geography drop-down menu to select Tribal Census Tract.</p>  <p>Participants should start reviewing and editing first, the Tribal Census Tracts layer with above maximum population counts or housing units, then the tribal census tracts with below minimum population counts or housing units. Next review the Tribal Block Groups layer with above maximum population counts or housing units, then the tribal block groups with below minimum population counts or housing units. If time permits, the participants can review the CDPs.</p> <table border="1" data-bbox="571 1339 1230 1570"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00100</td> <td>486</td> <td>1476</td> </tr> <tr> <td>T00200</td> <td>1371</td> <td>3848</td> </tr> <tr> <td>T00300</td> <td>781</td> <td>2367</td> </tr> <tr> <td>T00400</td> <td>1031</td> <td>2480</td> </tr> </tbody> </table>	Info	Housing	Population	T00100	486	1476	T00200	1371	3848	T00300	781	2367	T00400	1031	2480
Info	Housing	Population														
T00100	486	1476														
T00200	1371	3848														
T00300	781	2367														
T00400	1031	2480														

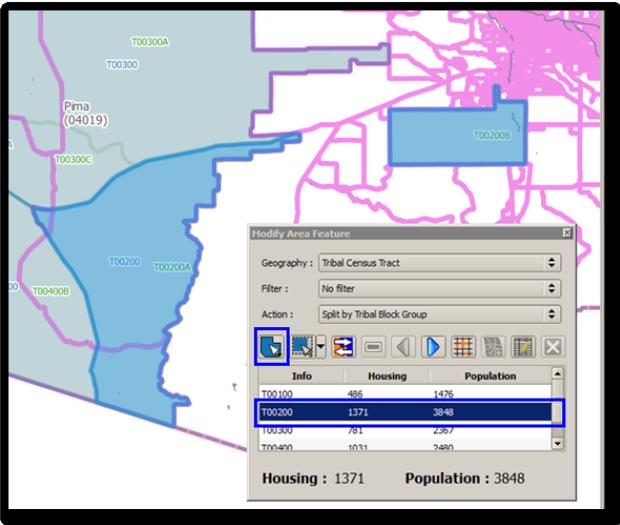
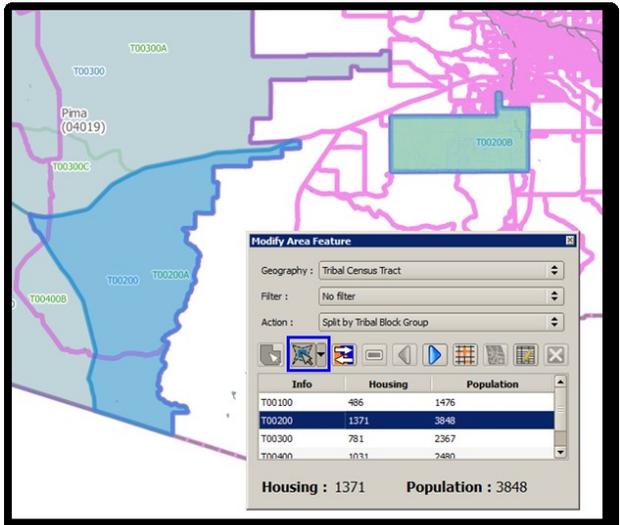
Step	Action and Result
Step 6	<p>As noted earlier in Section 7.4.2.8, the Census Bureau strongly encourages the use of imagery to review and update the geographies. To enable imagery, click the Add Imagery button and choose the imagery source to display in the Map View.</p>  <p>Once selected the imagery displays in the Map View.</p>

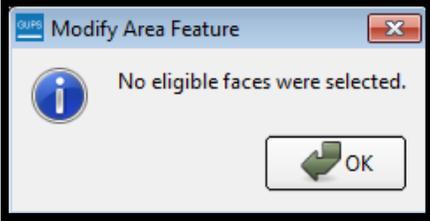
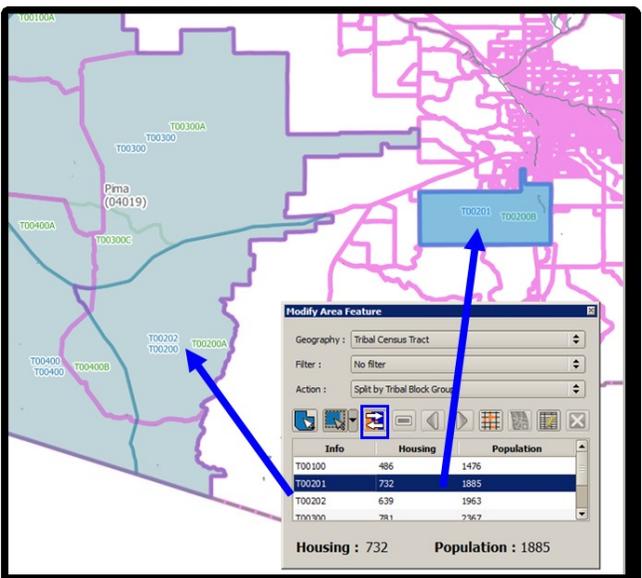
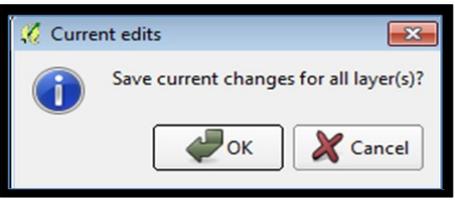
8.3.2 Split Tribal Census Tracts by Tribal Block Group

To resolve the tribal census tracts above the maximum threshold, participants can split tribal census tracts by tribal block group within the failing tribal census tract. Splitting by tribal block group is the first preference for splitting a tribal census tract with more than one tribal block groups because it retains the boundaries of the new tract on features already in use for statistical geographies (i.e., the tribal block groups). If participants wish to forgo a split and retain the above threshold tribal census tract, they must provide a justification in the TSR Criteria Review tool. [Table 34](#) explains the steps to split a tribal census tract by tribal block group(s).

Table 34: Split Tribal Census Tract by Tribal Block Group

Step	Action and Result
Step 1	Follow steps from Table 33: Select Tribal Census Tract to open the project and select a tribal census tract for editing.
Step 2	<p>Within the Modify Area Feature window, click the Filter drop-down menu to select Above Maximum (POP > 8000 or HU > 3200). This selects all tribal census tracts that have more than the maximum number of housing units or total population. Change the Action drop-down to Split by Tribal Block Group. This allows participants to split the census tract by block group(s).</p>  <p>Note: No tribal census tracts in this tribal entity fall outside of the thresholds, so the Filter drop-down remains set to “No filter.” The remaining steps proceed without regard to the threshold for the purpose of illustrating the tools.</p>

Step	Action and Result
<p>Step 3</p>	<p>Click Select Target Area button and click on the map to select a tribal census tract OR double click to select a tribal census tract from the Info column within the Modify Area Feature window. <i>The Map View zooms to the selected tribal census tract to review for potential splitting and highlights it in light blue/green color.</i></p>  <p><i>The housing and population totals displays on the bottom of the Modify Area Feature tool.</i></p>
<p>Step 4</p>	<p>Click the Select Feature(s) button with a single click on the Map View to select a single tribal block group. Hold down the Ctrl key on the keyboard and then click to select additional block groups as needed. Participants can also click the Map View and drag the mouse to select multiple block groups. <i>The selected tribal block group(s) highlight and the housing units and population numbers change dynamically.</i> All of the population and housing for this tribal census tract appears to be in this tribal block group.</p>  <p>IMPORTANT: Remember to keep the census tract threshold numbers in mind: Population: 1,200 – 8,000 Optimum: 4,000 Housing: 480 – 3,200 Optimum: 1,600</p>

Step	Action and Result															
	<p>Participants are only able to select tribal block group(s) within the highlighted tribal census tract. <i>Selecting tribal block group(s) outside the highlighted area will result in an error message.</i></p>  <p>Click OK to dismiss the error and continue.</p>															
<p>Step 5</p>	<p>If the selected tribal block group generates a valid new tribal census tract, click the Split by Block Group button to create two new census tracts.</p>  <table border="1" data-bbox="860 913 1177 1186"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00100</td> <td>486</td> <td>1476</td> </tr> <tr> <td>T00201</td> <td>732</td> <td>1885</td> </tr> <tr> <td>T00202</td> <td>639</td> <td>1963</td> </tr> <tr> <td>T001300</td> <td>781</td> <td>2367</td> </tr> </tbody> </table> <p>Housing : 732 Population : 1885</p>	Info	Housing	Population	T00100	486	1476	T00201	732	1885	T00202	639	1963	T001300	781	2367
Info	Housing	Population														
T00100	486	1476														
T00201	732	1885														
T00202	639	1963														
T001300	781	2367														
<p>Step 6</p>	<p>Refer to the Map View to verify that GUPS created the new tribal census tracts with new tribal census tract numbers. If completed successfully, the two new tribal census tracts have no shading (no red or green) unless they fall outside the acceptable ranges of population or housing unit counts.</p> <p>IMPORTANT: To reverse the split, prior to saving use the Undo button. Refer to Table 13 and Table 18 for instructions on the Undo functionality.</p>															
<p>Step 7</p>	<p>Click the Save button to save the edits and update the project. <i>The Current edits confirmation dialog box asks to save the changes for all layer(s).</i> For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p>  <p>Click OK to save or Cancel to return to the Map View without saving.</p>															

8.3.3 Split Tribal Census Tract by Face

To resolve the tribal census tracts above the maximum threshold, participants can split tribal census tracts by faces within the failing tribal census tract instead of by entire tribal block groups. Locate the definition of faces in [Appendix A](#). When there is only one tribal block group in a tract or where the tribal block groups do not reflect distinct land use areas, selecting a split by faces is preferred. If participants wish to forgo a split and retain the above threshold tribal census tract, they must provide a justification in the **TSR Criteria Review** tool.

When using this method for splitting a tribal census tract, there are two considerations. First, determine if there are clear land use distinctions within a tract (e.g., single-family homes on one side of the tract and multi-family apartments on the other). Conversely, there may be no significant difference in the land use or land use may not be the primary consideration because of overriding historical or linear feature factors. Either way, identifying a significant, visible, relatively permanent feature to use to split is important. See [Appendix G](#) for information regarding acceptable features for use in splitting tracts. [Table 35](#) explains the steps to split a tribal census tract by faces.

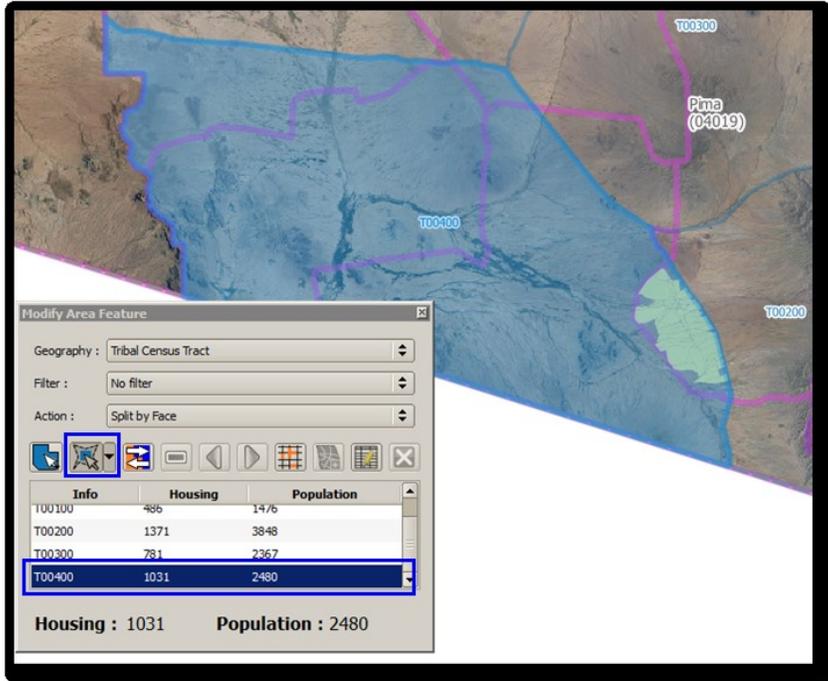
Table 35: Split Tribal Census Tract by Face

Step	Action and Result
Step 1	Follow steps from Table 33: Select Tribal Census Tract to open the project and select a tribal census tract for editing.
Step 2	<p>Within the Modify Area Feature window, click the Filter drop-down menu to select Above Maximum (POP > 8000 or HU > 3200). <i>This selects all census tracts that have more than the maximum number of housing units or total population.</i> Change the Action drop-down to Split by Face. <i>This allows participants to split the census tract by faces (areas).</i></p>  <p>Note: No tribal census tracts in this tribal entity fall outside of the thresholds, so the Filter drop-down remains set to “No filter.” The remaining steps proceed without regard to the threshold for the purpose of illustrating the tools.</p>
Step 3	As with the Split by Tribal Block Group step, click Select Target Area button and click on the map to select a tribal census tract OR double click to select a tribal census tract from the Info column within the Modify Area Feature window. <i>The Map View zooms to the selected tribal census tract to review for potential splitting and highlights it in light blue/green color.</i> In order to conduct an accurate split additional zooming may be necessary.

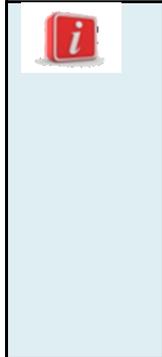
Step	Action and Result
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Step 4

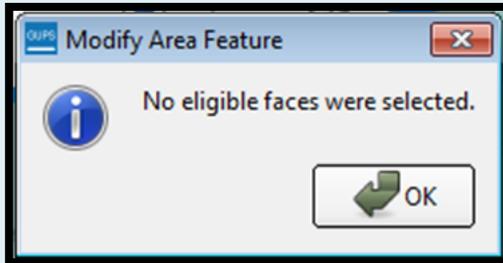
Click the **Select Features by Freehand** button to select the faces (areas) to split the tribal census tract. Left click the mouse on the starting point and drag the chasing line around the targeted area then right-click the mouse to end the review the selected area. *The selected faces highlight with a yellow/green shade.* Use of **Select Features by Polygon** instead of by freehand may be useful as well. *This step depicts imagery and the standard block groups outlined in pink.*



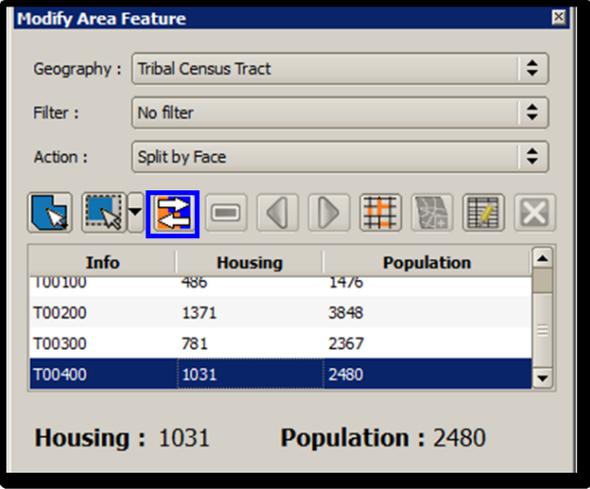
IMPORTANT: Remember to keep the census tract threshold numbers in mind:
 Population: 1,200 – 8,000 **Optimum: 4,000**
 Housing: 480 – 3,200 **Optimum: 1,600**

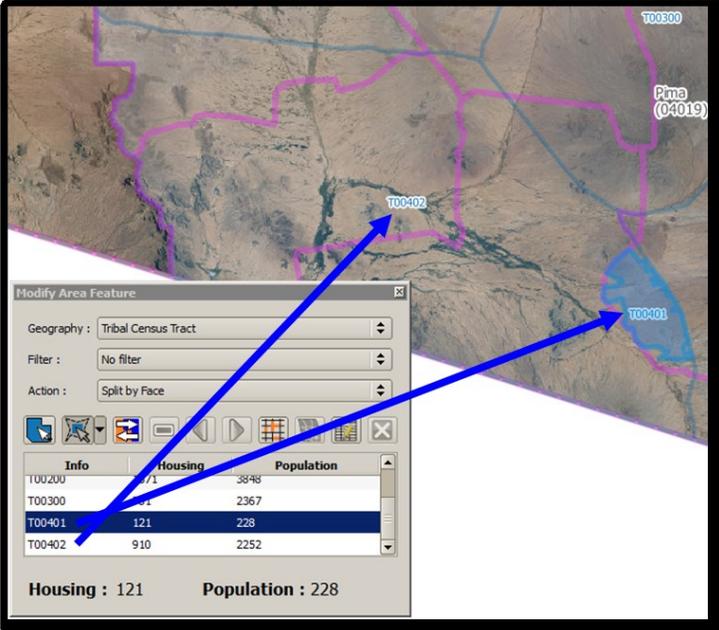


Participants are only able to select faces (areas) within the highlighted tribal census tract. *Selecting faces outside the highlighted area will result in an error message.*



Step	Action and Result
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Step 5	<p>If the selected faces generate a valid new tribal census tract, click the Split by Face button to create two new census tracts.</p>  <table border="1" data-bbox="641 525 1161 667"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00100</td> <td>486</td> <td>1476</td> </tr> <tr> <td>T00200</td> <td>1371</td> <td>3848</td> </tr> <tr> <td>T00300</td> <td>781</td> <td>2367</td> </tr> <tr style="background-color: #0056b3; color: white;"> <td>T00400</td> <td>1031</td> <td>2480</td> </tr> </tbody> </table> <p style="text-align: center;">Housing : 1031 Population : 2480</p>	Info	Housing	Population	T00100	486	1476	T00200	1371	3848	T00300	781	2367	T00400	1031	2480
Info	Housing	Population														
T00100	486	1476														
T00200	1371	3848														
T00300	781	2367														
T00400	1031	2480														

Step 6	<p>Refer to the Map View to verify that GUPS created the new tribal census tracts with new tribal census tract numbers. If completed successfully, the two new tribal census tracts have no shading (no red or green) unless they fall outside the acceptable ranges of population or housing unit counts. <i>This step depicts imagery.</i></p>  <table border="1" data-bbox="560 1186 954 1522"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00200</td> <td>1371</td> <td>3848</td> </tr> <tr> <td>T00300</td> <td>781</td> <td>2367</td> </tr> <tr style="background-color: #0056b3; color: white;"> <td>T00401</td> <td>121</td> <td>228</td> </tr> <tr> <td>T00402</td> <td>910</td> <td>2252</td> </tr> </tbody> </table> <p style="text-align: center;">Housing : 121 Population : 228</p>	Info	Housing	Population	T00200	1371	3848	T00300	781	2367	T00401	121	228	T00402	910	2252
Info	Housing	Population														
T00200	1371	3848														
T00300	781	2367														
T00401	121	228														
T00402	910	2252														

IMPORTANT: To reverse the split, prior to saving use the **Undo** button. Refer to [Table 13](#) and [Table 18](#) for instructions on the **Undo** functionality.

Step	Action and Result
Step 7	<p>Click the Save button to save the edits and update the project. <i>The Current edits confirmation dialog box asks to save the changes for all layer(s).</i> For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p> <div data-bbox="646 310 1149 550" style="text-align: center;"> </div> <p>Click OK to save or Cancel to return to the Map View without saving.</p>

8.3.4 Merge Tribal Census Tracts

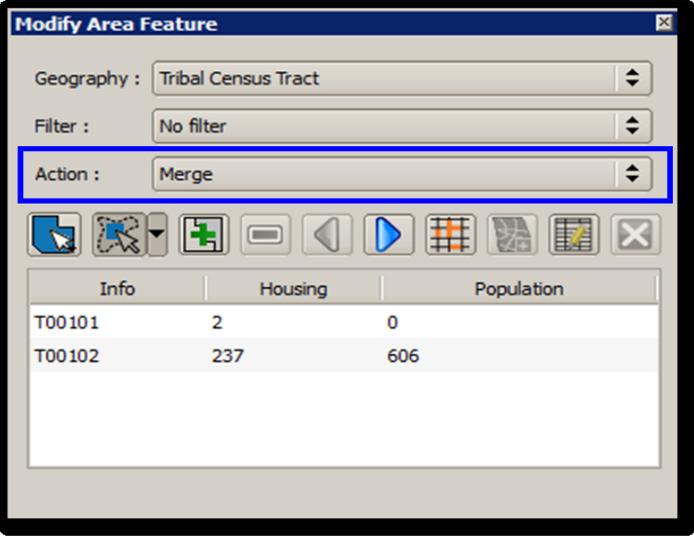
To resolve the tribal census tracts below the minimum threshold, participants perform a merge action or provide justification for retaining the tribal census tract without modification in the **TSR Criteria Review** tool. [Table 36](#) explains the steps to merge a tribal census tract.

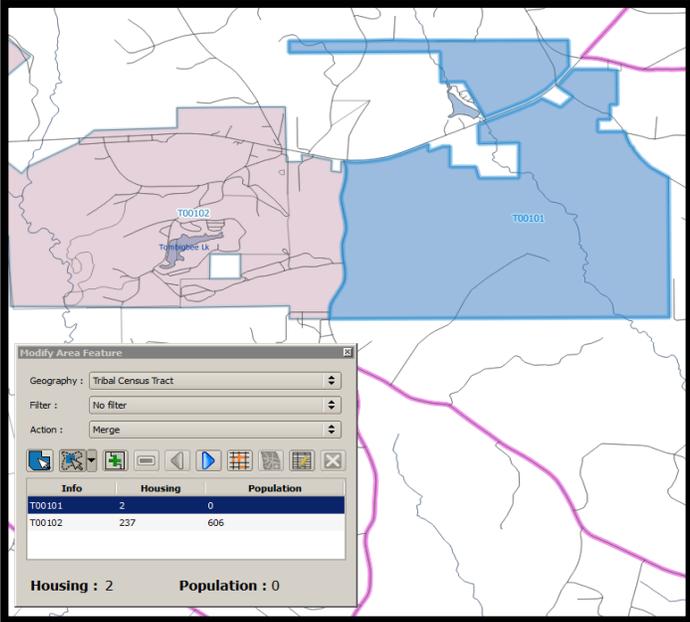
Consider the following priorities while reviewing the tribal census tracts that may require a merge.

- Merge two tracts of similar land use across a minor feature. This retains outer boundaries for historical comparison and ideally maintains continuity of housing type and demographics.
- Merge two tracts of dissimilar land use across a minor feature. This is less than ideal, but avoids creating tribal census tracts that span major landscape features.
- Merge two tracts of similar land use across a major feature. This is less than ideal, but may group areas of similar housing and demographic characteristics.
- Merge two tracts of dissimilar land use across a major feature. The main benefit is to maintain the outer boundaries for historical comparison, but runs the high risk of compromising comparability of housing and population data within the new tract.
- Alter boundary of below threshold tract to include tribal block groups of neighboring tract(s). This method is highly discouraged because it changes the outer, historic boundaries of census tracts.

Table 36: Merge Tribal Census Tracts

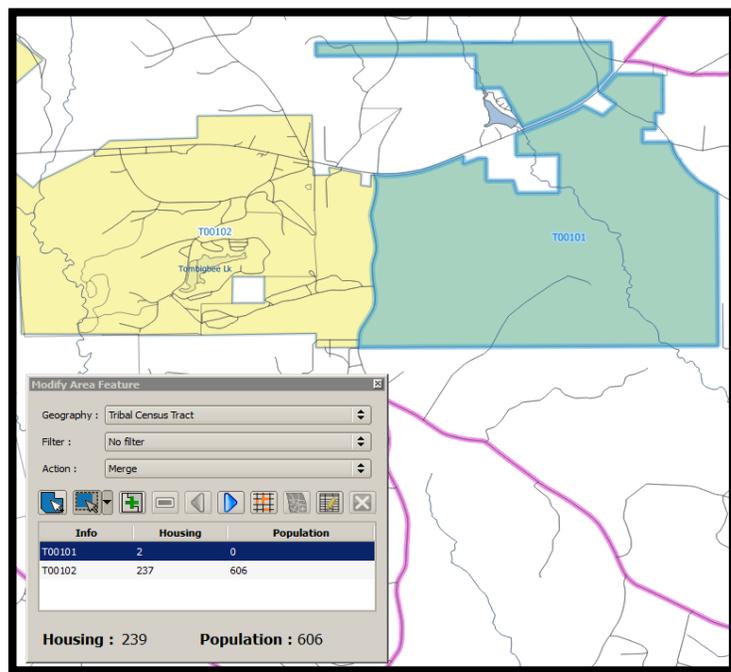
Step	Action and Result
Step 1	Follow steps from Table 33: Select Tribal Census Tract to open the project and select a tribal census tract for editing.

Step	Action and Result									
<p>Step 2</p>	<p>Within the Modify Area Feature window, click the Filter drop-down menu to select Below Minimum (POP < 1200 or HU < 480). This filters all tribal census tracts that have less than the minimum number of housing units or total population. Change the Action drop-down to Merge. This allows participants to merge (or combine) the tribal census tracts falling below the minimum requirements.</p>  <table border="1" data-bbox="586 638 1219 835"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00101</td> <td>2</td> <td>0</td> </tr> <tr> <td>T00102</td> <td>237</td> <td>606</td> </tr> </tbody> </table>	Info	Housing	Population	T00101	2	0	T00102	237	606
Info	Housing	Population								
T00101	2	0								
T00102	237	606								

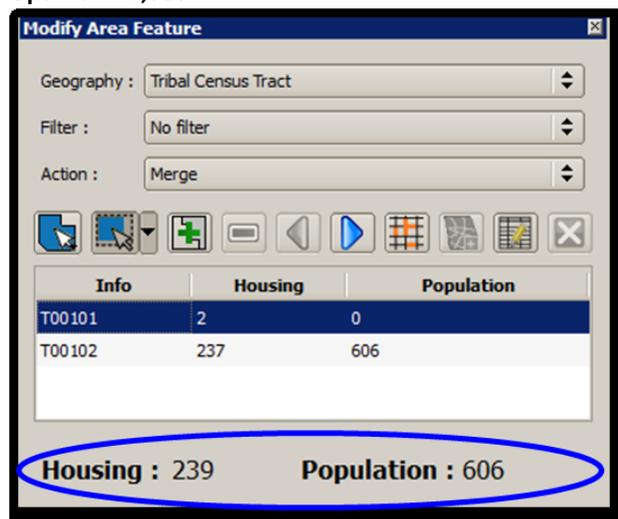
<p>Step 3</p>	<p>Double click to select a tribal census tract from the Info column within the Modify Area Feature window. The Map View zooms to the selected tribal census tract to review for a potential merge and highlights it in light blue/green color. Navigate the Map View to locate the best neighboring tribal census tract(s) to merge. Verify the tribal census tracts for historic relationships when possible.</p>  <table border="1" data-bbox="574 1388 906 1654"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00101</td> <td>2</td> <td>0</td> </tr> <tr> <td>T00102</td> <td>237</td> <td>606</td> </tr> </tbody> </table> <p>Housing : 2 Population : 0</p>	Info	Housing	Population	T00101	2	0	T00102	237	606
Info	Housing	Population								
T00101	2	0								
T00102	237	606								

Step	Action and Result
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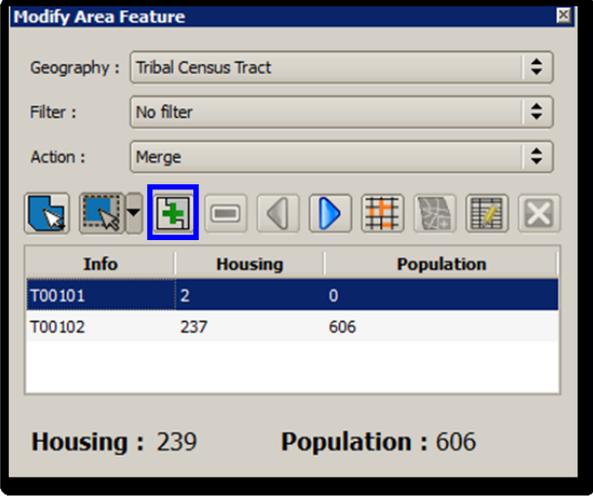
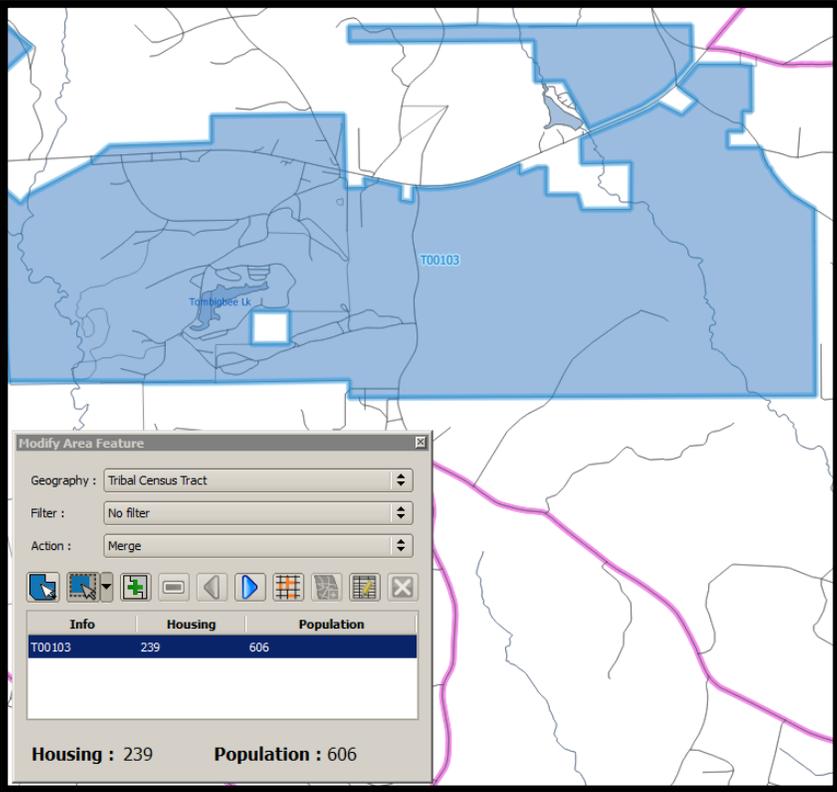
Step 4 Click the **Select Feature(s)** button to select the tribal census tract(s) to use to merge with the below minimum census tract. *The newly selected tribal census tract(s) highlight in yellow.* Zoom into the selected tribal census tract to confirm the entirety of its selection. In this example, there is only one additional tribal census tract to choose. If the participant wants to retain both tribal census tracts, they must provide justification in the **TSR Review Criteria** tool.



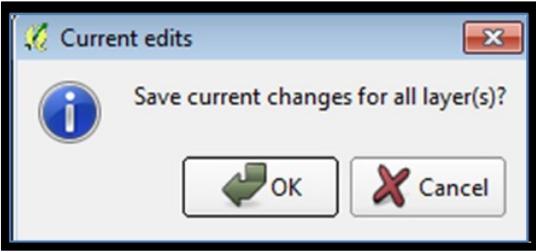
IMPORTANT: Remember to keep the census tract threshold numbers in mind:
 Population: 1,200 – 8,000 **Optimum: 4,000**
 Housing: 480 – 3,200 **Optimum: 1,600**



The housing and population totals change dynamically while selecting tracts to merge, allowing participants to see the results of the merge, prior to actually merging the tracts.

Step	Action and Result
<p>Step 5</p>	<p>If the selected tract(s) generate a valid new tribal census tract, or one that comes closer to meeting the criteria thresholds, click the Merge button to create a new census tract.</p> 
<p>Step 6</p>	<p>Refer to the Map View to verify that GUPS created the new tribal census tract with new tribal census tract number.</p>  <p>To reverse the merge, prior to saving use the Undo button. Refer to Table 13 and Table 18 for instructions on the Undo functionality.</p>

Step	Action and Result
<p>Step 7</p>	<p>Use the Change Attributes button to modify the merged tract number that GUPS automatically assigned if needed.</p> <div data-bbox="604 270 1200 774" data-label="Image"> </div> <p>In the Change Attributes window, enter all the requested information for the following fields with a red asterisk. Required information varies based on the type of geography.</p> <div data-bbox="662 850 1127 1459" data-label="Image"> </div> <p>Click OK to save the attribute change or Cancel to return to close the window without saving.</p> <p>Note: The Justify field exists in the Change Attributes tool. This field also exists in the TSR Criteria Review tool described in a later section. Character limit is 150 for this field.</p>

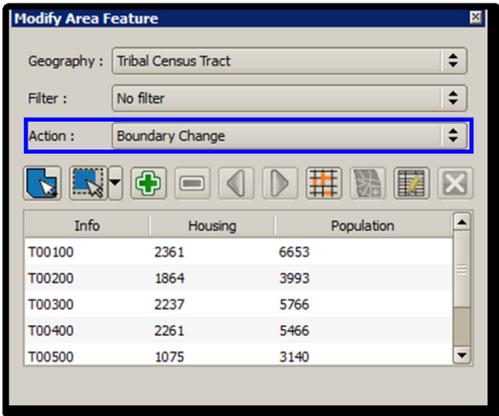
Step	Action and Result
Step 8	<p>Click the Save button to save the edits and update the project. The Current edits confirmation dialog box asks to save the changes for all layer(s). For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p>  <p>Click OK to save or Cancel to return to the Map View without saving.</p>

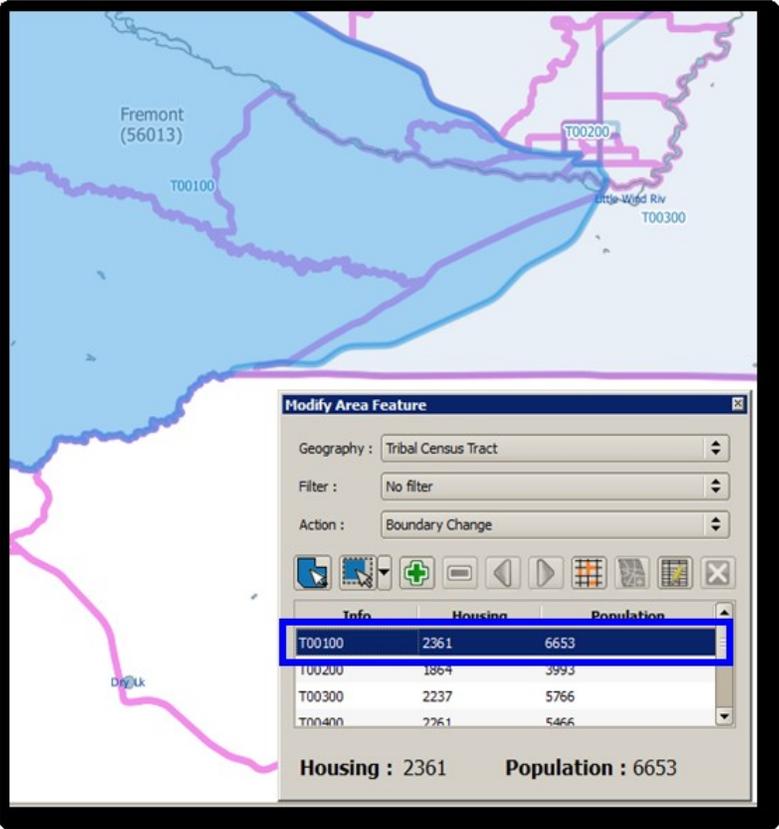
8.3.5 Change Tribal Census Tract Boundaries

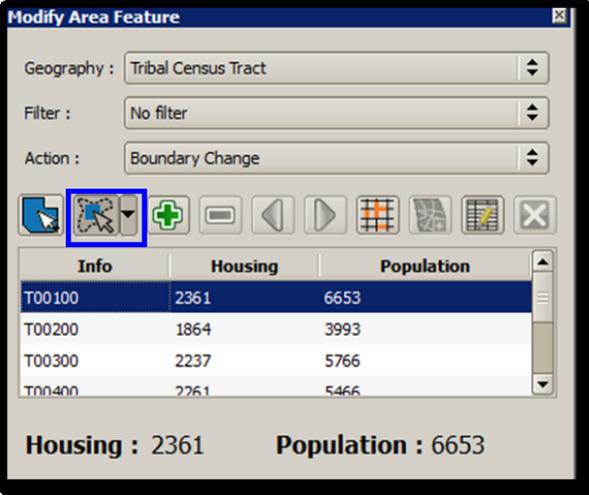
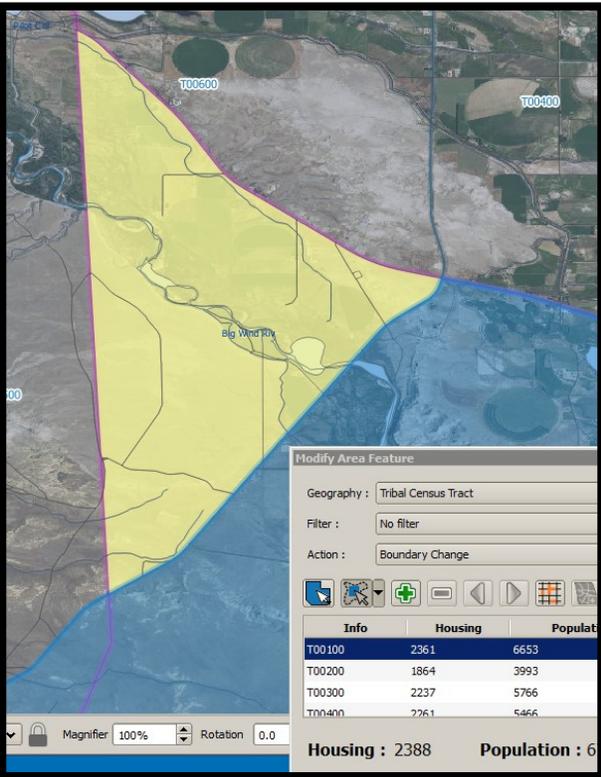
Participants apply boundary changes to tribal census tracts in instances when the boundaries are errant and no longer accurately reflect the real boundary or when the boundary does not follow any visible features. Participants cannot change the tribal census tract boundary where it follows a reservation and/or off-reservation trust land boundary, as tribal census tracts must cover the entire area of (and nest within) the reservation and/or off-reservation trust land. If the boundary of the tribal entity is incorrect, please report the boundary correction through the annual Tribal BAS program. Consult [Part C](#) in the Introduction of this document for details on the BAS program. Quality checks and comparisons of tribal census tracts to the tribal boundaries occur yearly to ensure the tribal census tracts align with the boundary of the tribal entity in the Census Bureau systems.

See [Section 8.3.5.1](#) for instructions to add linear features for use as tribal census tract boundaries and [Section 8.3.5.3](#) for instructions to delete linear features. The **Boundary Change** action uses the faces layer to modify tribal census tracts. Linear features create faces. [Table 37](#) explains the steps to change tribal census tract boundaries.

Table 37: Change Tribal Census Tract Boundaries

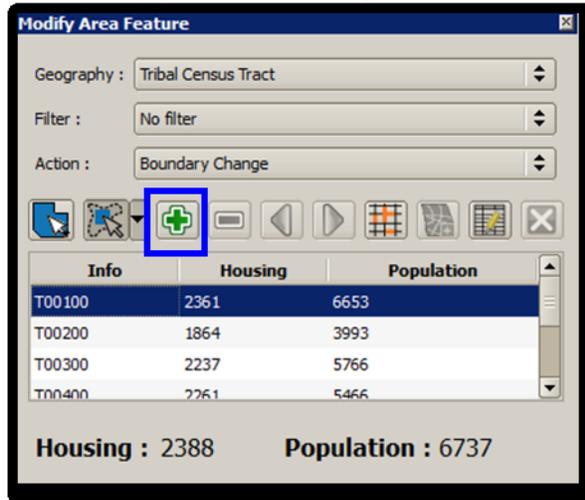
Step	Action and Result																		
Step 1	Follow steps from Table 33: Select Tribal Census Tract to open your dataset and select a tribal census tract for editing.																		
Step 2	<p>Within the Modify Area Feature window, click the drop-down Action menu to select Boundary Change.</p>  <table border="1"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00100</td> <td>2361</td> <td>6653</td> </tr> <tr> <td>T00200</td> <td>1864</td> <td>3993</td> </tr> <tr> <td>T00300</td> <td>2237</td> <td>5766</td> </tr> <tr> <td>T00400</td> <td>2261</td> <td>5466</td> </tr> <tr> <td>T00500</td> <td>1075</td> <td>3140</td> </tr> </tbody> </table>	Info	Housing	Population	T00100	2361	6653	T00200	1864	3993	T00300	2237	5766	T00400	2261	5466	T00500	1075	3140
Info	Housing	Population																	
T00100	2361	6653																	
T00200	1864	3993																	
T00300	2237	5766																	
T00400	2261	5466																	
T00500	1075	3140																	

Step	Action and Result															
<p>Step 3</p>	<p>Double click to select a tribal census tract from the Info column within the Modify Area Feature window. The Map View zooms to the selected tribal census tract to review for a potential boundary change.</p>  <table border="1" data-bbox="792 905 1247 1031"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>T00100</td> <td>2361</td> <td>6653</td> </tr> <tr> <td>T00200</td> <td>1804</td> <td>3993</td> </tr> <tr> <td>T00300</td> <td>2237</td> <td>5766</td> </tr> <tr> <td>T00400</td> <td>2261</td> <td>5466</td> </tr> </tbody> </table> <p>Housing : 2361 Population : 6653</p>	Info	Housing	Population	T00100	2361	6653	T00200	1804	3993	T00300	2237	5766	T00400	2261	5466
Info	Housing	Population														
T00100	2361	6653														
T00200	1804	3993														
T00300	2237	5766														
T00400	2261	5466														

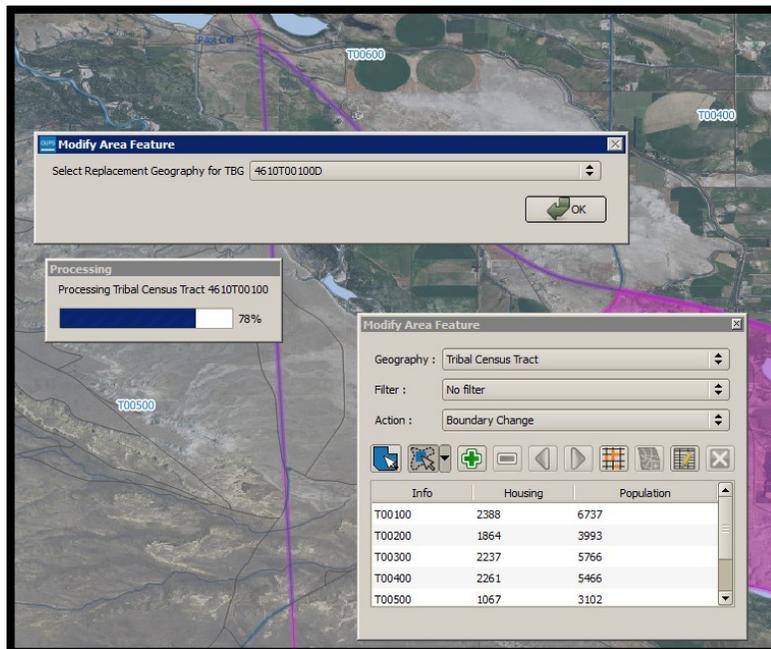
Step	Action and Result
<p>Step 4</p>	<p>Click the Select Features By Freehand button to select the faces to use for boundary change.</p>  <p><i>The selected faces highlight in yellow. This step depicts imagery.</i></p>  <p>IMPORTANT: Remember to keep the census tract threshold numbers in mind: Population: 1,200 – 8,000 Optimum: 4,000 Housing: 480 – 3,200 Optimum: 1,600</p> <p>The housing and population totals change dynamically while selecting faces to alter the tribal census tract boundary, allowing participants to see the results of the change, prior to actually modifying the boundary.</p>
	<p>Selecting noncontiguous faces from the selected tribal census tract result in geographic errors. Participants must correct contiguity errors or provide justification for retaining the pieces prior to submitting their data to the Census Bureau.</p>

Step	Action and Result
------	-------------------

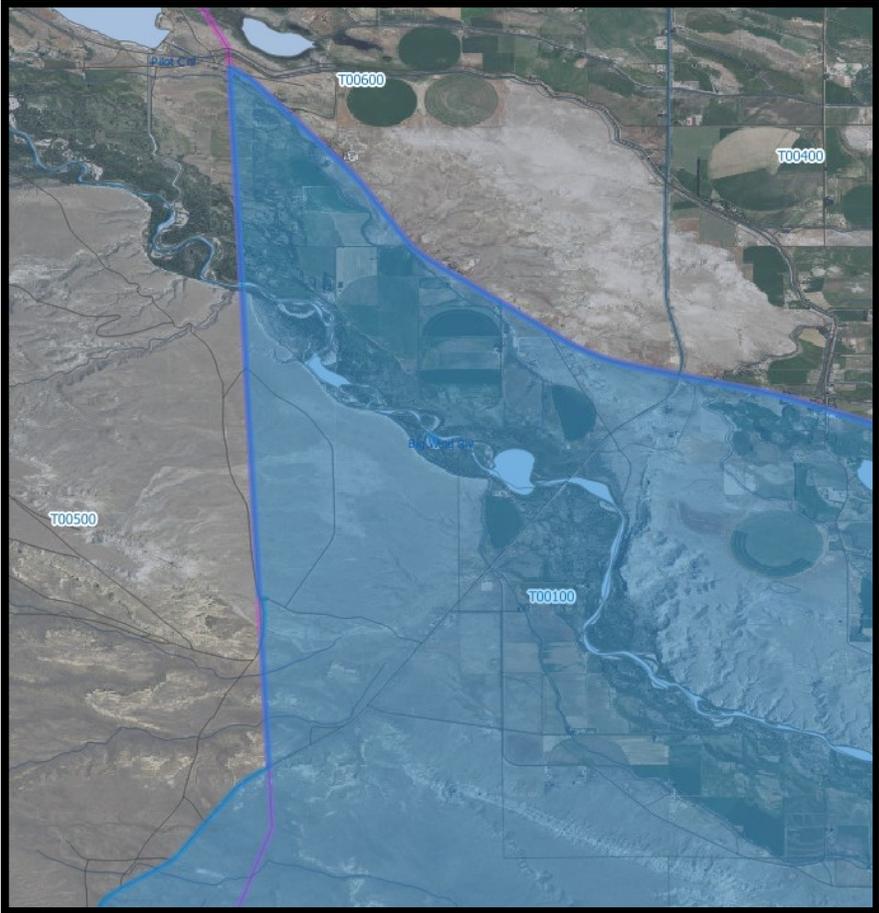
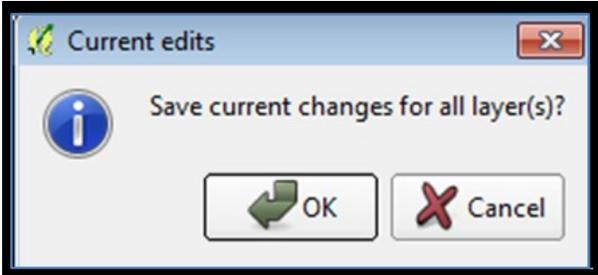
Step 5	Click the Add Area button to apply boundary change to the selected tribal census tract. <i>The housing increased from 2,361 to 2,388 and population increased from 6,653 to 6,737.</i>
---------------	---



A window displays requesting participants select the tribal block group to add the selected faces. The **Map View** displays the potential tribal block group in the drop-down menu. After selecting the appropriate tribal block group, click **OK** to add the selected faces to the selected tribal block group highlighted on the map.



Note: GUPS highlights each tribal block group as selected, allowing the participant to choose the adjacent one. Be mindful that this step can introduce contiguity errors.

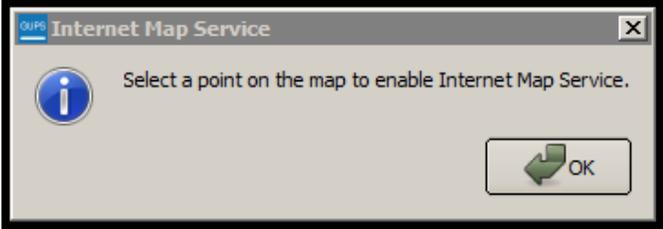
Step	Action and Result
<p>Step 6</p>	<p>Refer to the Map View to verify that GUPS captured the boundary change properly for the tribal census tract.</p>  <p>To reverse the boundary change, simply add the area back to the original tribal census tract or perform the Undo action prior to saving. Refer to Table 13 and Table 18 for instructions on the Undo functionality.</p>
<p>Step 7</p>	<p>Click the Save button to save the edits and update the project. <i>The Current edits confirmation dialog box asks to save the changes for all layer(s).</i> For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p>  <p>Click OK to save or Cancel to return to the Map View without saving.</p>

8.3.5.1 Add Linear Feature

The addition of new or missing linear features may be necessary to form faces in order to modify all of the statistical geographies. While it may be tempting to add all missing linear features, with the time constraints of PSAP, focus first on adding only the linear features necessary to split statistical geographies or form new statistical geographies. Participants must utilize the Add Imagery button within GUPS for digitizing reference and may use the Internet Map Service button to provide a secondary source/visual of the area. [Table 18](#) describes the use of both buttons. Review [Table 38](#) for a detailed example.

IMPORTANT: Do not add linear features without the assistance of imagery.

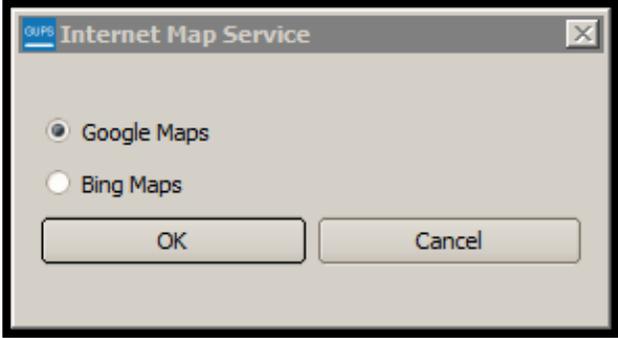
Table 38: Add Linear Feature

Step	Action and Result
Step 1	Download and review the data as described in Section 6.2 Open GUPS and Start a New Project .
Step 2	<p>Follow steps from Table 33: Select Tribal Census Tract to open the existing project. Zoom to the area to add linear features. Ensure imagery is enabled as described in Step 7 of that table.</p> 
Step 3	<p>Click the Internet Map Service button.</p>  <p>An Internet Map Service window appears asking participants to select a point on the map to enable Internet Map Service.</p> 

Step	Action and Result
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Step 4

Click a point in the **Map View** near the missing feature(s) to select the targeted area from which to launch the internet service. *Another **Internet Map Service** window appears to select either **Google Maps** or **Bing Maps**.*



After selected, click **OK** and a new internet tab or session opens to the targeted section chosen in **Step 4**.



Step 5

Click the **Add Linear Feature** button from within the **PSAP** toolbar.



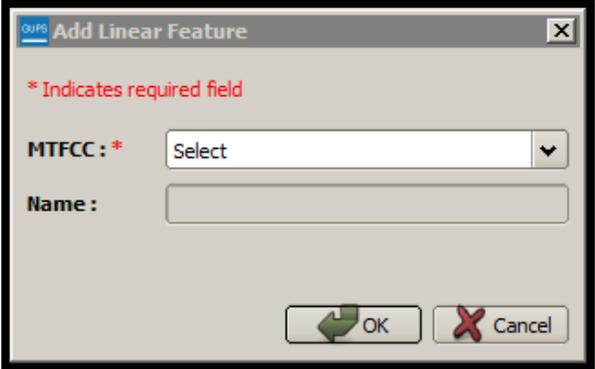
Step **Action and Result**

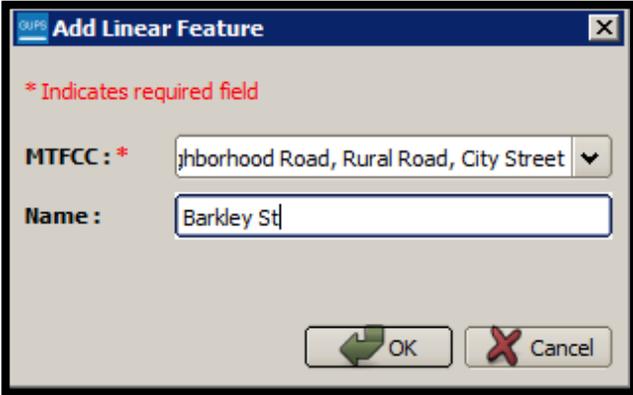
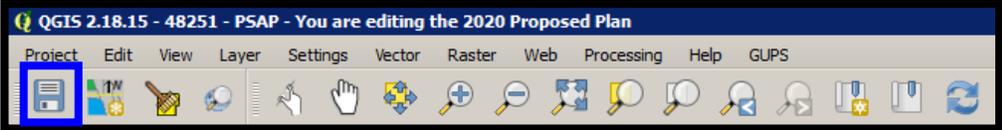
Step 6 Zoom in to a proper scale for adding the linear feature.



Step 7 In the **Map View**, left-click the mouse button to start adding the linear feature. Continue to left-click to add nodes as necessary to add shape to the road. To complete the linear feature, right-click.

*An **Add Linear Feature** window appears to enter the required **MTFCC** and a **Name**.*



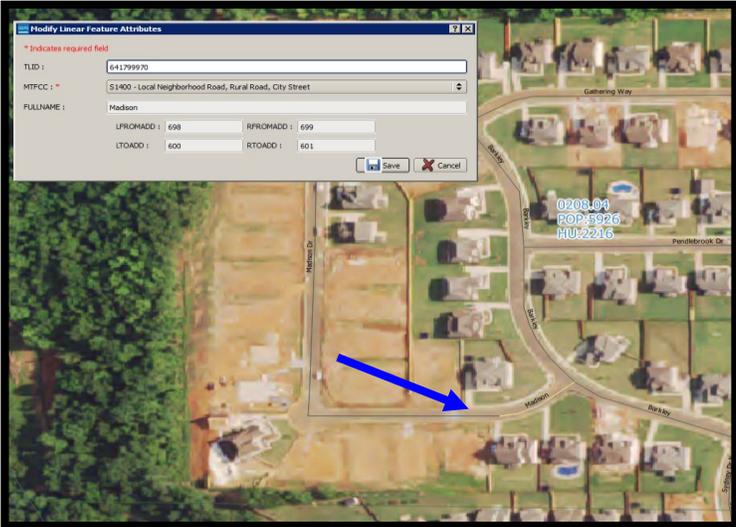
Step	Action and Result
<p>Step 8</p>	<p>From the MTFCC drop-down menu, select the proper code for the newly added feature. In this example, choose S1400.</p>  <p>The Name field activates after choosing the MTFCC. Enter the name and click OK.</p> 
<p>Step 9</p>	<p>Click the Save button to save the changes. Continue with the same steps to add any additional linear features.</p> 

8.3.5.2 Modify Linear Feature Attributes

Participants can modify the attributes of linear features by using the Modify Linear Feature Attributes button within the PSAP toolbar. This may be necessary to correct errors in existing feature names or correct errant MTFCC codes. See [Table 39](#) for an example.

Table 39: Modify Linear Feature Attributes

Step	Action and Result
<p>Step 1</p>	<p>Locate the linear feature to modify. Select the Modify Linear Feature Attributes button in the PSAP toolbar.</p> 
<p>Step 2</p>	<p>In the Map View, left-click the linear feature to modify. A Modify Linear Feature Attributes</p>

Step	Action and Result
	<p><i>window appears.</i></p> 
Step 3	<p>Change the MTFCC or the FULLNAME of the feature. Click the Save button to save the modification.</p>

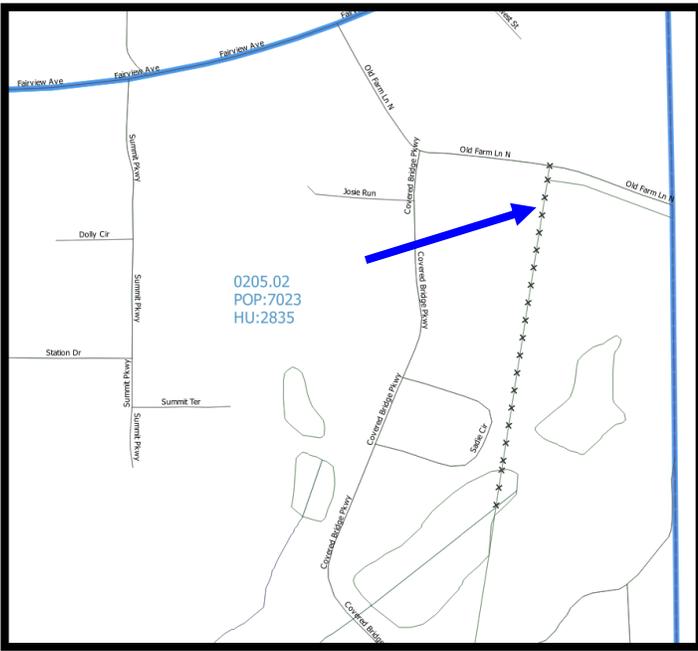
8.3.5.3 Delete/Restore Linear Feature

GUPS allows participants to delete linear features and/or restore recently deleted features since the last save process by using the Delete/Restore Linear Feature button within the PSAP toolbar. Review [Table 40](#) for examples of both deleting and restoring a linear feature.

Table 40: Delete/Restore Linear Feature

Step	Action and Result
Step 1	<p>Locate the linear feature to delete. Select the Delete/Restore Linear Feature button in the PSAP toolbar.</p> 

Step	Action and Result
<p>Step 2</p>	<p>In the Map View, left-click the linear feature to delete. A <i>Delete/Restore Linear Feature</i> window appears.</p> <div data-bbox="548 268 1219 499" data-label="Image"> </div> <div data-bbox="418 527 1349 1094" data-label="Image"> </div>
<p>Step 3</p>	<p>Click OK to proceed with deletion of the selected feature.</p>
	<p>If the feature selected forms the boundary of an existing entity, <i>GUPS</i> displays the following warning message.</p> <div data-bbox="451 1230 1317 1440" data-label="Image"> </div>

Step	Action and Result
Step 4	<p>The feature is marked for deletion and displays in GUPS with the "X" character along the entire feature. Imagery disabled in order to better view the "X" characters.</p> 
Step 5	<p>GUPS uses the same tool to restore the deleted feature if the deletion was in error. Enable the Delete/Restore Linear Feature button. Select the feature marked for deletion from the previous step. A <i>Delete/Restore Linear Feature</i> window appears asking for confirmation to restore the linear feature.</p>  <p>Click OK to restore the feature.</p>
Step 6	<p>Click the Save button to save the changes.</p>

8.4 Tribal Block Group Update Instructions

Participants can split tribal block groups by face, merge tribal block groups, and change tribal block group boundaries. **Part 1** outlines the criteria and background for updating tribal block groups, while **Part 2** introduced the tools for updating. This section provides detailed examples for performing the aforementioned updates of splitting, merging, and changing boundaries.

IMPORTANT: Participants may renumber the tribal block groups using the **Renumbering Tool** in the **PSAP toolbar**. If participants want to renumber to avoid any gaps in the numbering of tribal block groups, execute the tool after all work on the tribal block group geography concludes. Do not execute the tool, if participants wish to retain the existing tribal block group numbering.

8.4.1 Select Tribal Block Group

Participants can change and modify tribal block groups. This is the second priority for participants’ review after reviewing and updating tribal census tracts. However, there may be instances where the tribal census tracts remain within specified thresholds, but tribal blocks groups require updating due to population and housing changes. In those cases, participants begin with a review of the tribal block groups. Steps to select a tribal block group to begin a review are included in [Table 41](#).

Table 41: Select Tribal Block Group

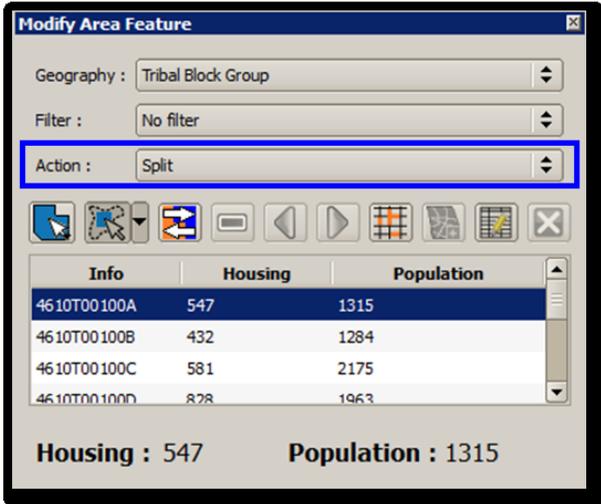
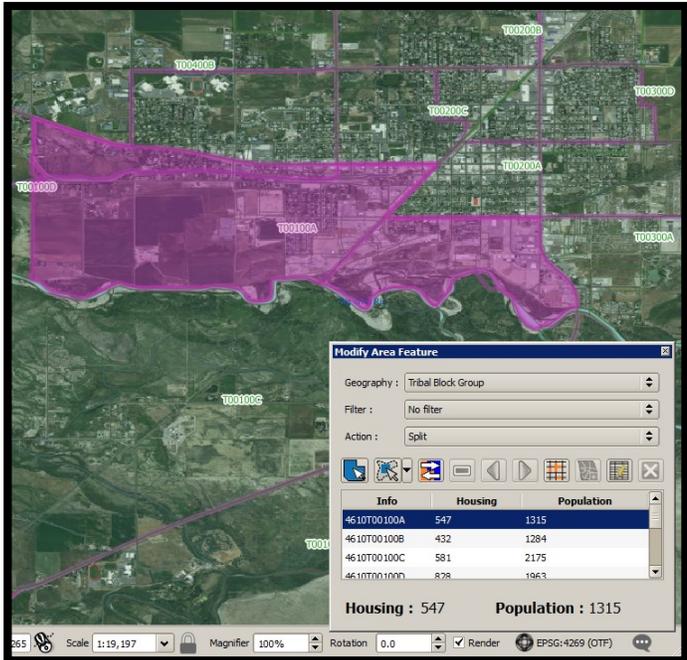
Step	Action and Result
Step 1	Download and review the data as described in 0, Error! Not a valid result for table.
Step 2	Follow steps from Table 33: Select Tribal Census Tract . After completing Steps 1 – 4 modify Step 5 by clicking the Modify Area Feature, Geography drop-down menu and selecting Tribal Block Group . Enable the imagery as described in Step 6 in order to visualize and orient to the block group(s) under review.

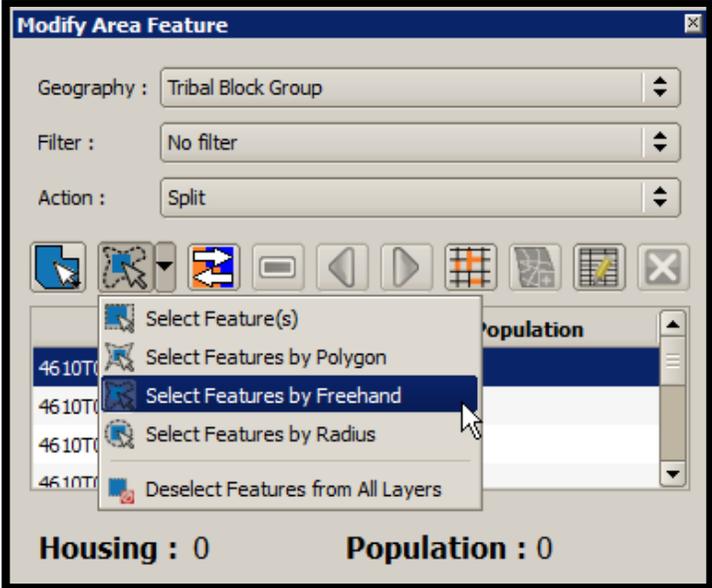
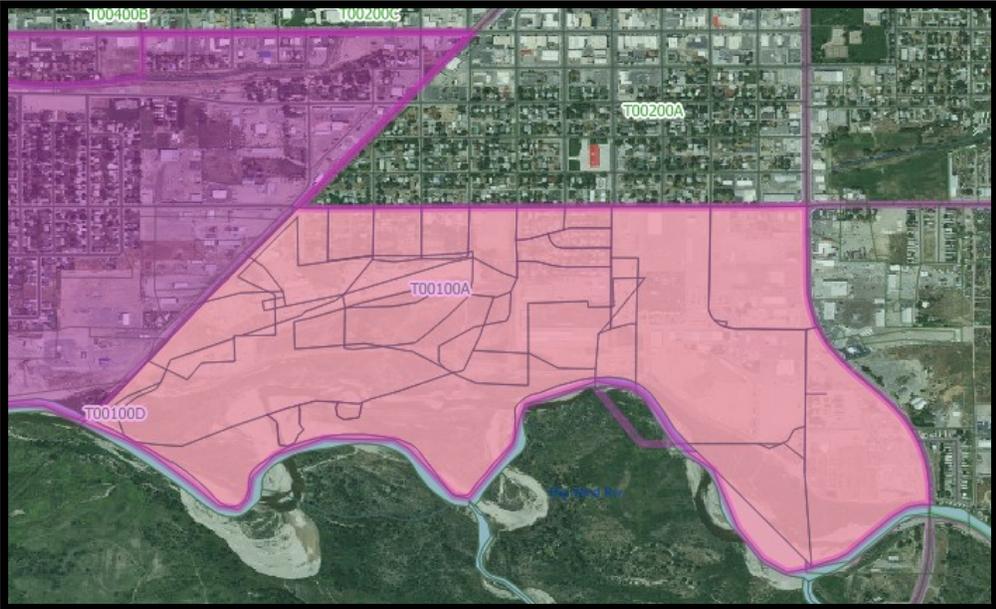
Info	Housing	Population
4610T00100A	547	1315
4610T00100B	432	1284
4610T00100C	581	2175
4610T00100D	828	1963
4610T00200A	607	1171

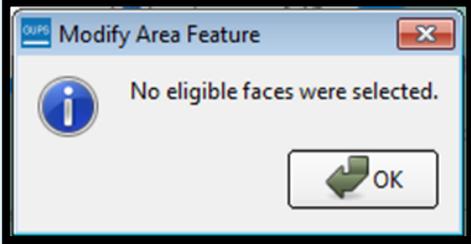
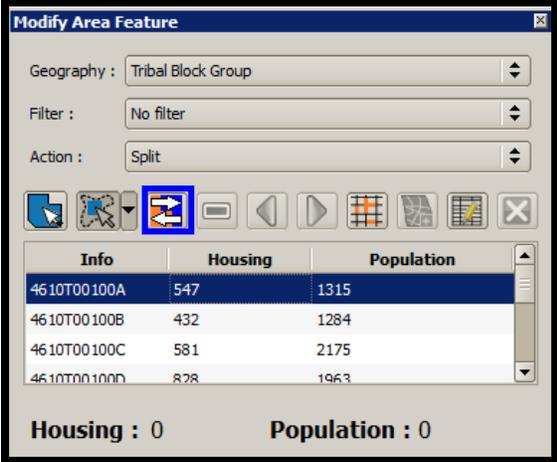
8.4.2 Split a Tribal Block Group

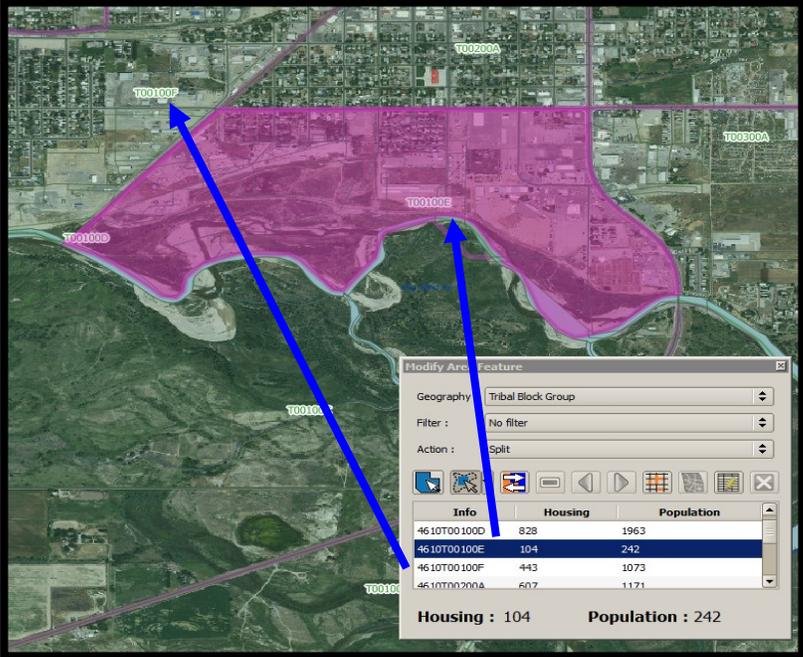
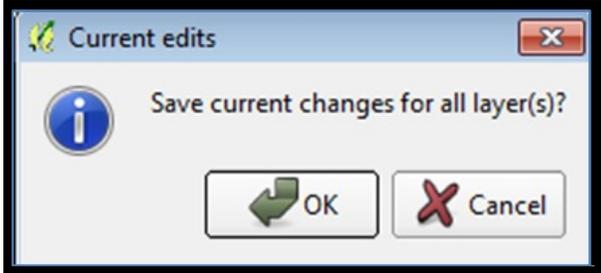
To resolve the tribal block groups above the maximum threshold, participants split block groups by faces within the problematic block group, ideally into two equal parts. Participants are encouraged to use one of two options when splitting tribal block groups. Either split the block group into geometrically equal parts or split according to land use areas. [Table 42](#) explains the steps to split a block group.

Table 42: Split Tribal Block Group

Step	Action and Result
Step 1	Follow steps from Table 41: Select Tribal Block Group to open the project and select tribal block groups for editing.
Step 2	<p>Within the Modify Area Feature window, click the drop-down Filter menu to select Above Maximum (POP > 3000 or HU > 1200). <i>This will select all tribal block groups that have more than the maximum number of houses/people.</i> Change the Action drop-down to Split. <i>This allows participants to split the block group by faces (areas).</i></p>  <p>Note: No tribal block groups in this tribal entity fall outside of the thresholds, so the Filter drop-down remains set to “No filter.” The remaining steps proceed without regard to the threshold for the purpose of illustrating the tools.</p>
Step 3	<p>Double click to select a tribal block group from the Info column within the Modify Area Feature window. <i>The Map View zooms to the selected tribal block group to review for potential splitting and highlights it.</i> An additional zoom level, performed by using the Zoom In button on the Standard toolbar, is necessary to visualize the area to split.</p> 

Step	Action and Result
<p>Step 4</p>	<p>Click the Select Features by Freehand button to select the faces to use to split the tribal block group. Left click the mouse on the starting point and drag the chasing line around the targeted area then right-click the mouse to end the review the selected area. <i>The selected faces highlight with a yellow/green shade, likely distorted by the shading of a tribal block group or tribal census tract.</i></p>  

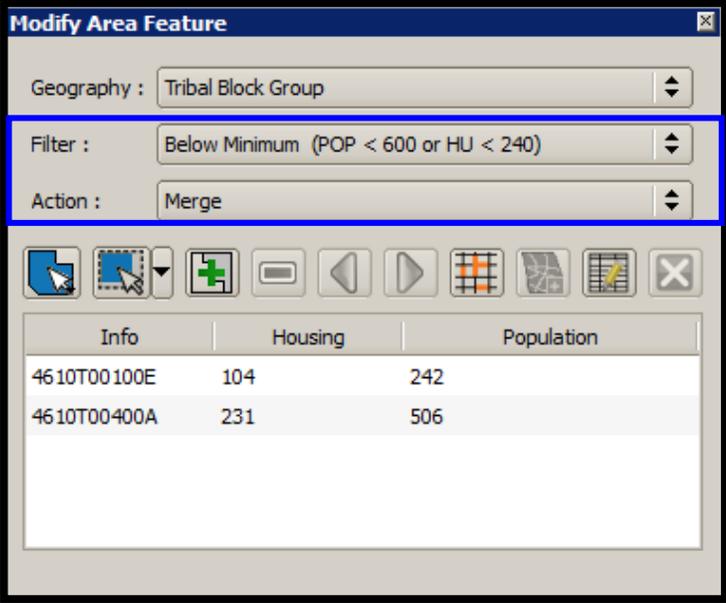
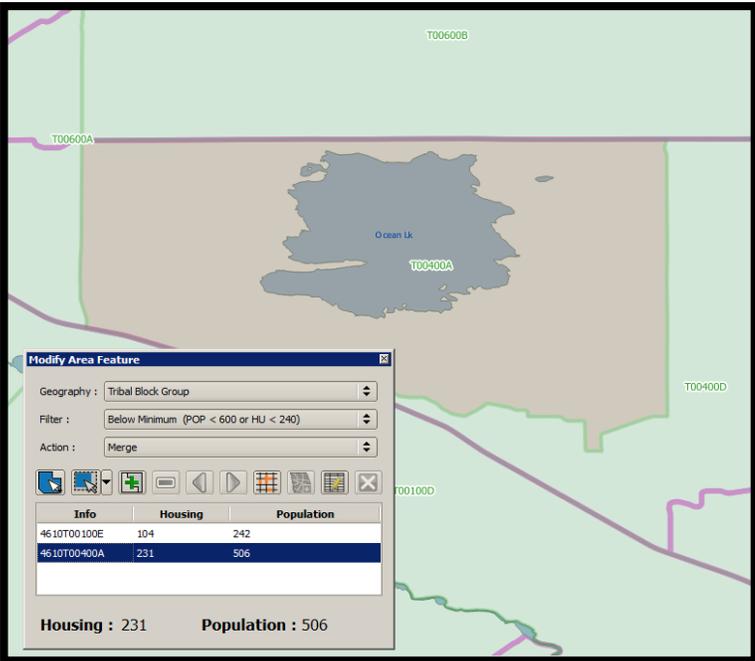
Step	Action and Result															
	<p>Participants are only able to select faces (areas) within the highlighted tribal block group. <i>Selecting faces outside the highlighted area will result in an error message.</i></p> 															
<p>Step 6</p>	<p>If the selected faces generate a valid new tribal block group, click the Split button to create two new tribal block groups.</p>  <table border="1" data-bbox="630 867 1144 1014"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>4610T00100A</td> <td>547</td> <td>1315</td> </tr> <tr> <td>4610T00100B</td> <td>432</td> <td>1284</td> </tr> <tr> <td>4610T00100C</td> <td>581</td> <td>2175</td> </tr> <tr> <td>4610T00100D</td> <td>828</td> <td>1963</td> </tr> </tbody> </table> <p>Housing : 0 Population : 0</p>	Info	Housing	Population	4610T00100A	547	1315	4610T00100B	432	1284	4610T00100C	581	2175	4610T00100D	828	1963
Info	Housing	Population														
4610T00100A	547	1315														
4610T00100B	432	1284														
4610T00100C	581	2175														
4610T00100D	828	1963														

Step	Action and Result
<p>Step 7</p>	<p>Refer to the Map View to verify that GUPS created the new tribal block groups with new block group labels (4610T00100E and 4610T00100F).</p>  <p>To reverse the split, prior to saving use the Undo button. Refer to Table 13 and Table 18 for instructions on the Undo functionality.</p>
<p>Step 8</p>	<p>Click the Save button to save the edits and update the project. <i>The Current edits confirmation dialog box asks to save the changes for all layer(s).</i> For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p>  <p>Click OK to save or Cancel to return to the Map View without saving.</p>

8.4.3 Merge Tribal Block Groups

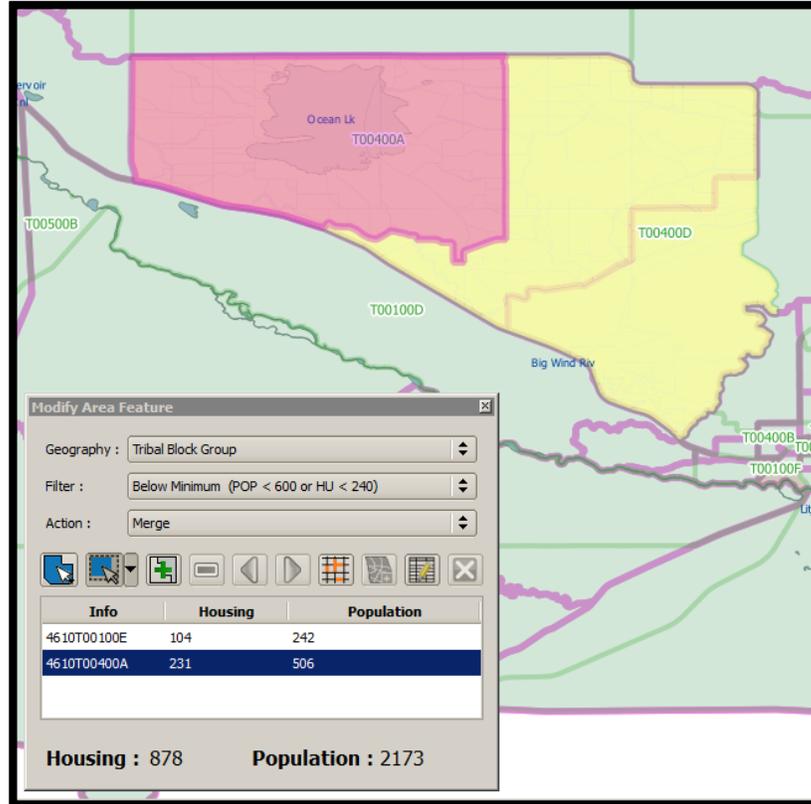
To resolve the tribal block groups below the minimum threshold, participants perform a merge action by merging neighboring tribal block groups or provide a justification in the **TSR Criteria Review** tool for retaining the below threshold tribal block groups. If both the tribal block group and its tribal census tract are outside of thresholds, resolve the tribal census tract first. Because tribal block groups nest within tribal census tracts, the higher-level tribal census tract changes affect how participants resolve tribal block group errors. The historical comparability is not a concern for tribal block groups as it is for tribal census tracts, so participants have more freedom to make boundary corrections and reorganize existing tribal block groups to meet criteria thresholds. [Table 43](#) explains the steps to merge a tribal block group.

Table 43: Merge Tribal Block Groups

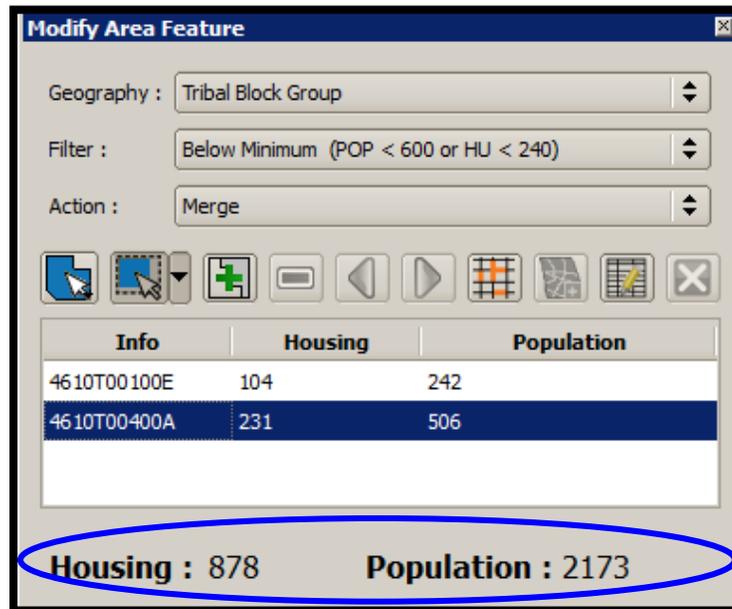
Step	Action and Result									
Step 1	Follow steps from Table 41: Select Tribal Block Group to open the project and select a tribal block group for editing.									
Step 2	<p>Within the Modify Area Feature window, click the Filter drop-down menu to select Below Minimum (POP < 600 or HU < 240). This selects all tribal block groups that have less than the minimum number of housing units or total population. Change the Action drop-down to Merge. This allows participants to merge (or combine) the tribal block groups falling below the minimum requirements.</p>  <table border="1" data-bbox="542 785 1219 1020"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>4610T00100E</td> <td>104</td> <td>242</td> </tr> <tr> <td>4610T00400A</td> <td>231</td> <td>506</td> </tr> </tbody> </table>	Info	Housing	Population	4610T00100E	104	242	4610T00400A	231	506
Info	Housing	Population								
4610T00100E	104	242								
4610T00400A	231	506								
Step 3	<p>Double click to select a tribal block group from the Info column within the Modify Area Feature window. The Map View zooms to the selected tribal block group to review for potential merging and highlights it.</p> 									

Step 4

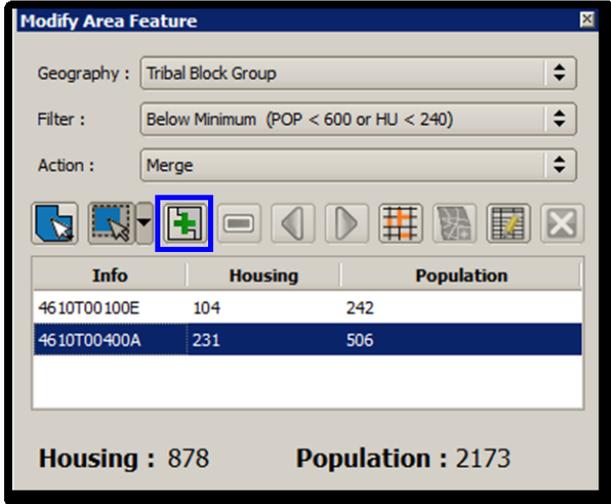
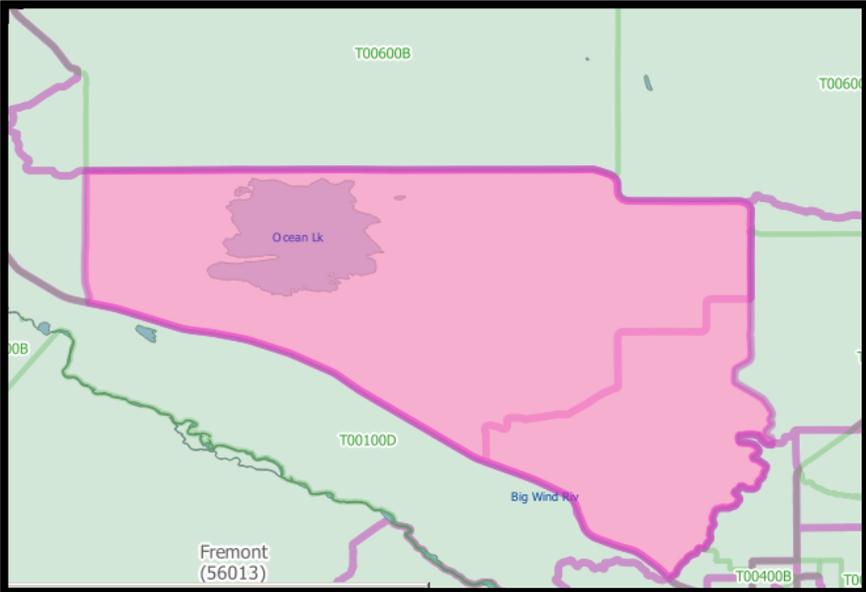
Click the **Select Feature(s)** to select the tribal block group(s) to use to merge with the below minimum tribal block group. *The newly selected block group(s) highlight in yellow.*

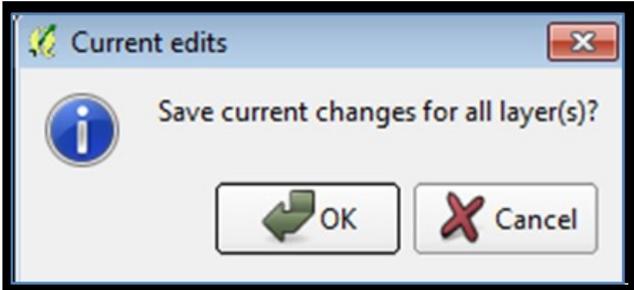


IMPORTANT: Remember to keep the block group threshold numbers in mind:
Population: 600 – 3,000
Housing: 240 – 1,200



The housing and population totals change dynamically while selecting tribal block groups to merge, allowing participants to see the results of the merge, prior to actually completing the merge.

Step	Action and Result
<p>Step 5</p>	<p>If the selected tribal block group(s) generate a valid new tribal block group, click the Merge button to create a new tribal block group.</p> 
<p>Step 6</p>	<p>Refer to the Map View to verify that GUPS created the new tribal block group with new block group letter.</p>  <p>To reverse the merge, prior to saving use the Undo button. Refer to Table 13 and Table 18 for instructions on the Undo functionality.</p> <p>Note: Execute the Renumbering Tool after all work on the tribal entity is complete. Do not execute it after editing each tribal block group. If a tribal entity submission includes gaps in the block group numbering, the Census Bureau will confirm with the participant whether they want the tribal block groups renumbered or whether they forgot to execute the tool. Pending the answer, the Census Bureau will renumber the tribal block groups prior to creation of the verification products or they will retain the existing tribal block group numbering.</p>
<p>Step 7</p>	<p>Consider using the Change Attributes button within the Modify Area Feature tool to edit the tribal block group letter assigned by GUPS, or use the Renumbering Tool in the PSAP toolbar to renumber all of the tribal block groups at the conclusion of all tribal block group updates.</p>

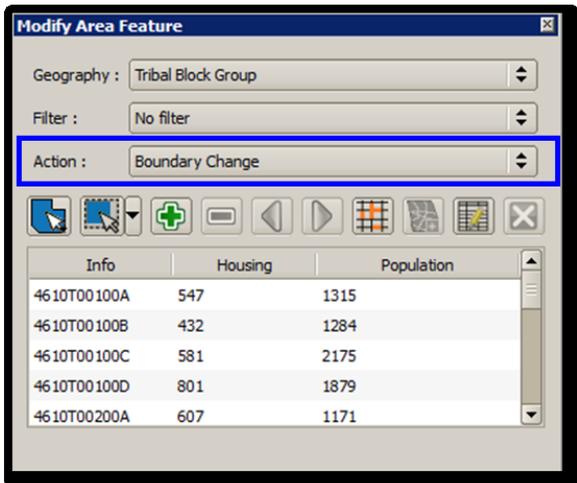
Step	Action and Result
Step 8	<p>Click the Save button to save the edits and update the project. The Current edits confirmation dialog box asks to save the changes for all layer(s). For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p>  <p>Click OK to save or Cancel to return to the Map View without saving.</p>

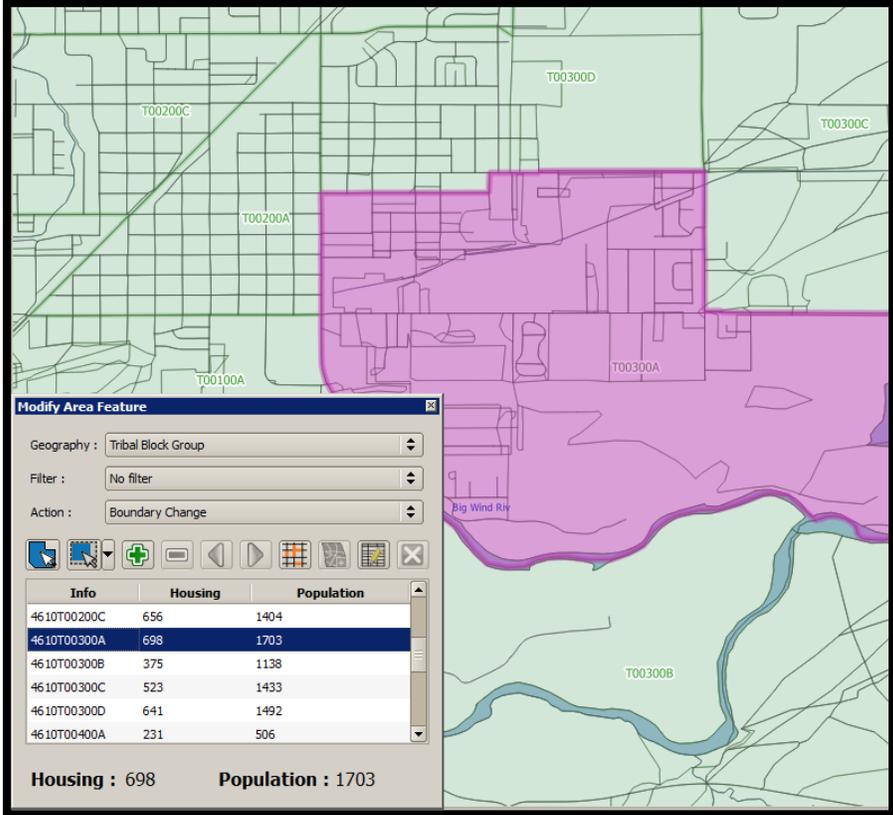
8.4.4 Change Tribal Block Group Boundaries

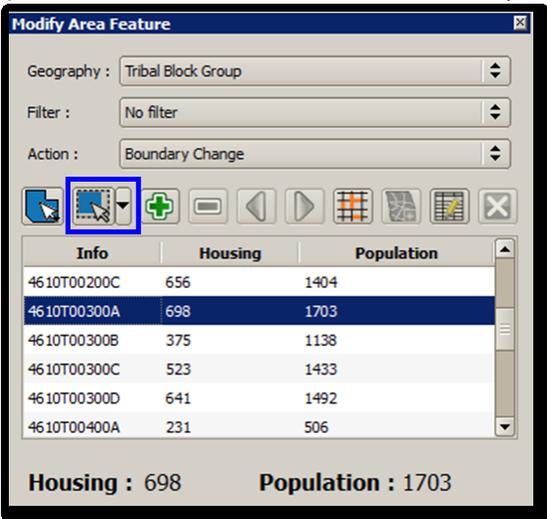
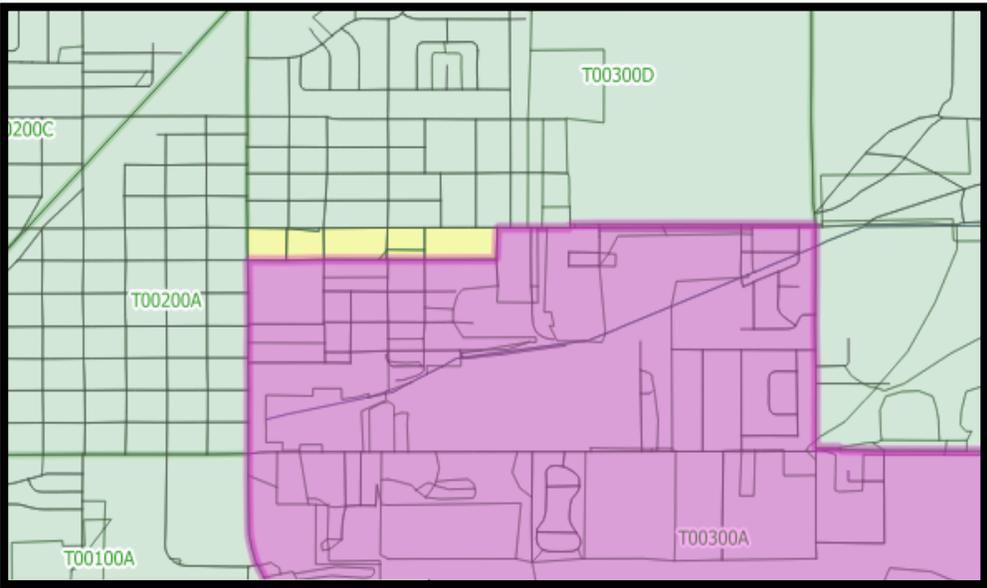
Participants can apply boundary changes to tribal block group boundaries when the housing units and or the populations are below the required thresholds, when the boundary does not follow any visible features, or when the boundaries shown in GUPS are errant and no longer accurately reflect the real boundary. The Census Bureau will likely accept small revisions to tribal block group boundaries, but will likely deny boundary changes that affect a large amount of population in the affected tribal block groups.

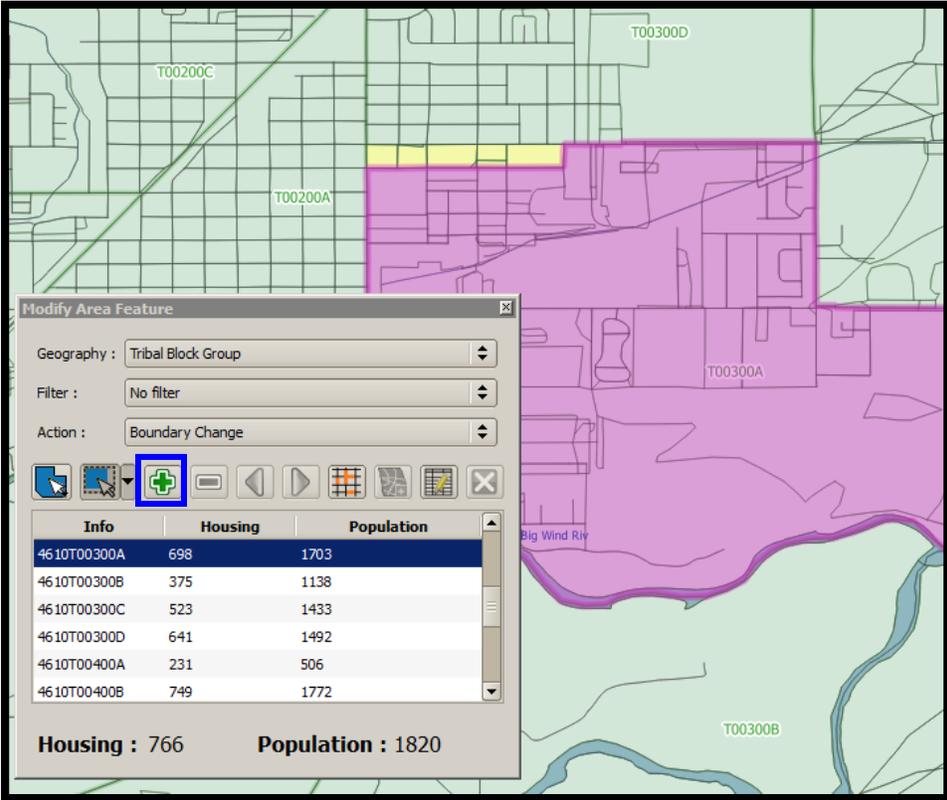
As with tribal census tracts, the boundary change action uses the faces layer to modify tribal block groups. [Table 44](#) explains the steps to change block group boundaries.

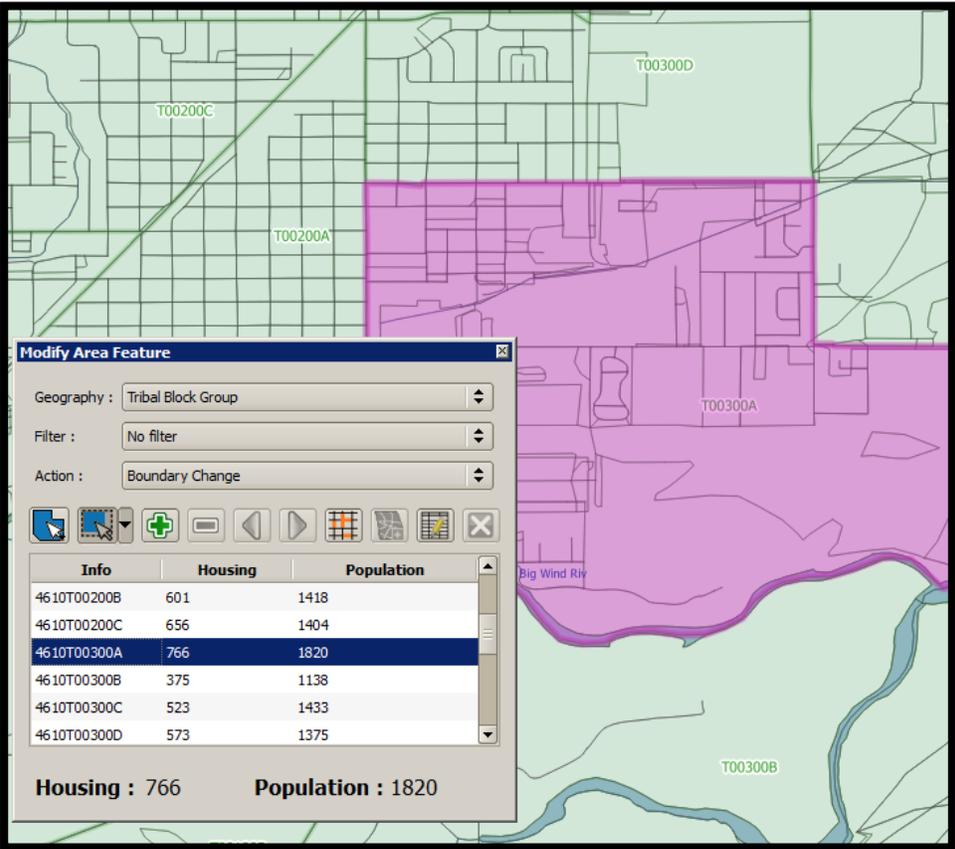
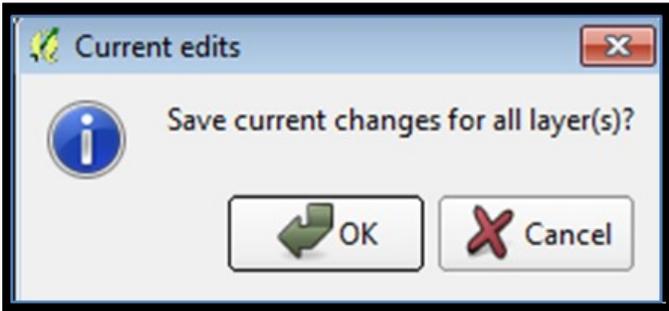
Table 44: Change Tribal Block Group Boundaries

Step	Action and Result																		
Step 1	Follow steps from Table 41: Select Tribal Block Group to open your dataset and select a tribal block group for editing.																		
Step 2	<p>Within the Modify Area Feature window, click the drop-down Action menu to select Boundary Change.</p>  <table border="1"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>4610T00100A</td> <td>547</td> <td>1315</td> </tr> <tr> <td>4610T00100B</td> <td>432</td> <td>1284</td> </tr> <tr> <td>4610T00100C</td> <td>581</td> <td>2175</td> </tr> <tr> <td>4610T00100D</td> <td>801</td> <td>1879</td> </tr> <tr> <td>4610T00200A</td> <td>607</td> <td>1171</td> </tr> </tbody> </table>	Info	Housing	Population	4610T00100A	547	1315	4610T00100B	432	1284	4610T00100C	581	2175	4610T00100D	801	1879	4610T00200A	607	1171
Info	Housing	Population																	
4610T00100A	547	1315																	
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4610T00100C	581	2175																	
4610T00100D	801	1879																	
4610T00200A	607	1171																	

Step	Action and Result																					
<p>Step 3</p>	<p>Double click to select a tribal block group from the Info column within the Modify Area Feature window. <i>The Map View zooms to the selected tribal block group to review for a potential boundary change.</i></p>  <p>The screenshot shows a map interface with several tribal block groups labeled (e.g., T00200C, T00200A, T00100A, T00300D, T00300C, T00300A, T00300B). A specific block group, 4610T00300A, is highlighted in purple. Below the map is the 'Modify Area Feature' window. It has a 'Geography' dropdown set to 'Tribal Block Group', a 'Filter' dropdown set to 'No filter', and an 'Action' dropdown set to 'Boundary Change'. Below these are several icons. A table is displayed with the following data:</p> <table border="1"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>4610T00200C</td> <td>656</td> <td>1404</td> </tr> <tr> <td>4610T00300A</td> <td>698</td> <td>1703</td> </tr> <tr> <td>4610T00300B</td> <td>375</td> <td>1138</td> </tr> <tr> <td>4610T00300C</td> <td>523</td> <td>1433</td> </tr> <tr> <td>4610T00300D</td> <td>641</td> <td>1492</td> </tr> <tr> <td>4610T00400A</td> <td>231</td> <td>506</td> </tr> </tbody> </table> <p>Below the table, the summary shows: Housing : 698 and Population : 1703.</p>	Info	Housing	Population	4610T00200C	656	1404	4610T00300A	698	1703	4610T00300B	375	1138	4610T00300C	523	1433	4610T00300D	641	1492	4610T00400A	231	506
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Step	Action and Result
<p>Step 4</p>	<p>Click the Select Feature(s) button to select the faces to use for boundary change.</p>  <p>The selected faces from T00300D highlight in yellow.</p>  <p>IMPORTANT: Remember to keep the block group threshold numbers in mind: Population: 600 – 3,000 Housing: 240 – 1,200</p>
	<p>GUPS does not allow for the selection of faces outside of the active tribal census tract. This means the faces must be within the same tribal census tract as the tribal block group.</p>

Step	Action and Result
Step 5	<p>Click the Add Area button to apply boundary change to the selected tribal block group.</p>  <p>The housing and population numbers dynamically adjust prior to finalizing the boundary change (change from 698 and 1,703 to 766 and 1,820 respectively).</p>

Step	Action and Result
<p>Step 6</p>	<p>Refer to the Map View to verify that GUPS captured the boundary change properly for the tribal block group.</p>  <p>To reverse the boundary change, simply add the area back to the original tribal block group or perform the Undo action prior to saving. Refer to Table 13 and Table 18 for instructions on the Undo functionality.</p>
<p>Step 7</p>	<p>Click the Save button to save the edits and update the project. <i>The Current edits confirmation dialog box asks to save the changes for all layer(s).</i> For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p>  <p>Click OK to save or Cancel to return to the Map View without saving.</p>

8.5 Census Designated Place (CDP) Update Instructions

Tribal participants can perform boundary changes to existing CDPs that fall either on or off the reservations and/or off-reservation trust lands. Performing a boundary change adds faces to, or removes faces from, existing CDPs. Participants can add new CDPs, delete existing CDPs, and

they can perform attribute updates on existing CDPs. CDPs may exist on the tribal entity land or may be located off the reservation and in the county in which the tribal entity exists.

As a reminder from [Chapter 4](#) of this document, the Census Bureau recommends CDP boundaries follow visible features, except in circumstances where the boundary is coincident with the nonvisible boundary of a state, county, minor civil division, or incorporated place.

8.5.1 Select Census Designated Place (CDP)

Steps to select a CDP to begin a review are included in [Table 45](#).

Table 45: Select Census Designated Place (CDP)

Step	Action and Result
Step 1	Download and review the data as described in Section 6.2 Open GUPS and Start a New Project .
Step 2	Follow steps from Table 33: Select Tribal Census Tract to open your dataset. After completing Steps 1 – 4 modify Step 5 by clicking the Modify Area Feature, Geography drop-down menu and selecting Census Designated Place (CDP) . Enable the imagery as described in Step 6 in order to visualize and orient to the CDP(s) under review.

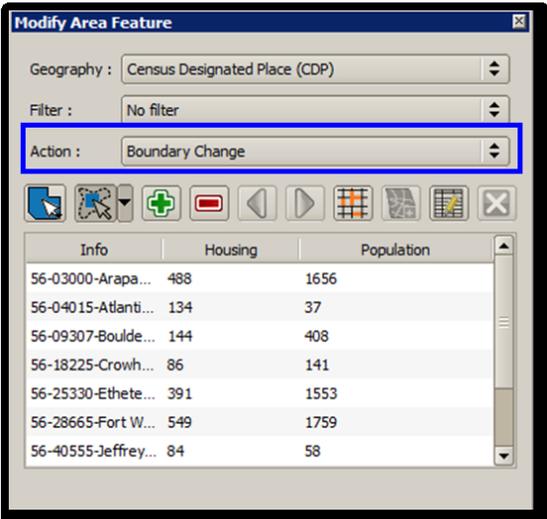
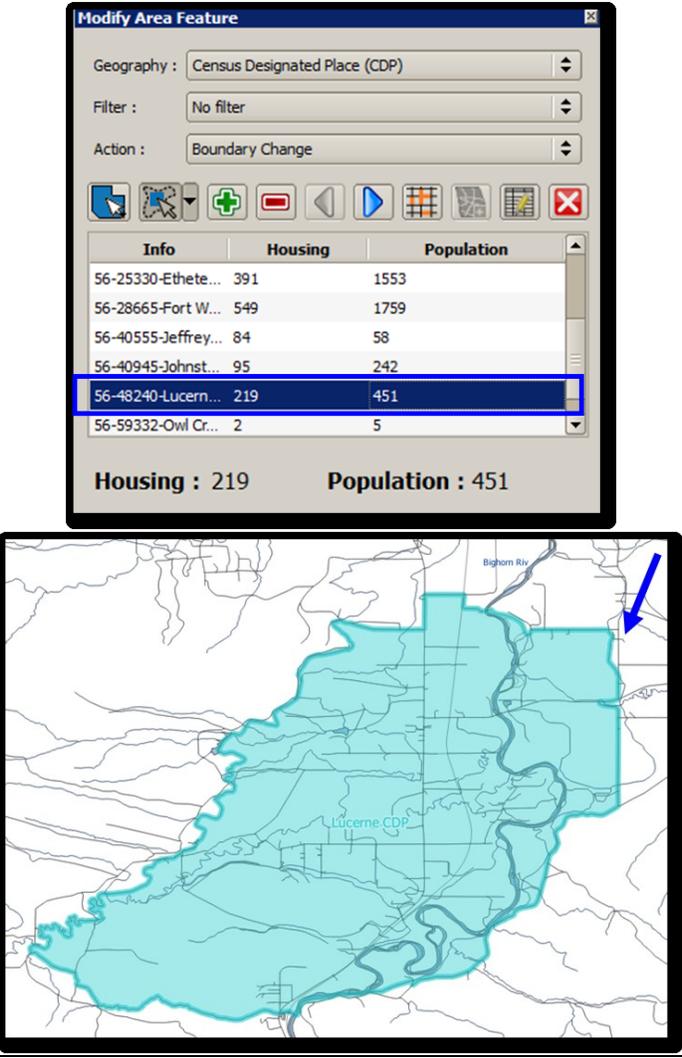
Info	Housing	Population
56-09307-Boulde...	144	408
56-18225-Crowh...	86	141
56-25330-Ethete...	391	1553
56-28665-Fort W...	549	1759
56-40555-Jeffrey...	84	58
56-40945-Johnst...	95	242
56-59332-Owl Cr...	2	5

8.5.2 Boundary Change – Add Area (CDP)

Participants can perform boundary changes to CDPs by adding new area or removing an existing area. The **Boundary Change** action uses the faces layer to modify CDPs. CDP boundaries must follow physical boundaries (with some exceptions as mentioned in [Chapter 4](#)), so the use of imagery when performing this action is vital. If the addition of area dictates an attribute change, refer to the **Change Attribute** section for details on modifying the name of existing CDPs. [Table 46](#) explains the steps to add area to an existing CDP.

Table 46: Boundary Change – Add Area (CDP)

Step	Action and Result
Step 1	Follow steps from Table 45: Select Census Designated Place to open the project and select Census Designated Places for editing.

Step	Action and Result																								
<p>Step 2</p>	<p>Within the Modify Area Feature window, click the Action drop-down menu to select Boundary Change.</p>  <table border="1" data-bbox="652 506 1149 737"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr><td>56-03000-Arapa...</td><td>488</td><td>1656</td></tr> <tr><td>56-04015-Atlanti...</td><td>134</td><td>37</td></tr> <tr><td>56-09307-Boulde...</td><td>144</td><td>408</td></tr> <tr><td>56-18225-Crowh...</td><td>86</td><td>141</td></tr> <tr><td>56-25330-Ethete...</td><td>391</td><td>1553</td></tr> <tr><td>56-28665-Fort W...</td><td>549</td><td>1759</td></tr> <tr><td>56-40555-Jeffrey...</td><td>84</td><td>58</td></tr> </tbody> </table>	Info	Housing	Population	56-03000-Arapa...	488	1656	56-04015-Atlanti...	134	37	56-09307-Boulde...	144	408	56-18225-Crowh...	86	141	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58
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56-40555-Jeffrey...	84	58																							
<p>Step 3</p>	<p>Double click to select a CDP from the Info column within the Modify Area Feature window. <i>The Map View zooms to the selected CDP to review and highlights it.</i></p>  <table border="1" data-bbox="652 1100 1149 1297"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr><td>56-25330-Ethete...</td><td>391</td><td>1553</td></tr> <tr><td>56-28665-Fort W...</td><td>549</td><td>1759</td></tr> <tr><td>56-40555-Jeffrey...</td><td>84</td><td>58</td></tr> <tr><td>56-40945-Johnst...</td><td>95</td><td>242</td></tr> <tr><td>56-48240-Lucern...</td><td>219</td><td>451</td></tr> <tr><td>56-59332-Owl Cr...</td><td>2</td><td>5</td></tr> </tbody> </table> <p>Housing : 219 Population : 451</p>	Info	Housing	Population	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58	56-40945-Johnst...	95	242	56-48240-Lucern...	219	451	56-59332-Owl Cr...	2	5			
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Step	Action and Result																					
Step 4	<p>Click the Select Feature(s) button to select the faces to add to the CDP. Participants can choose any of the four choices beneath the Select Feature(s) button to accomplish the modification to the CDP.</p> <div data-bbox="544 273 1250 955" data-label="Image"> <table border="1" data-bbox="576 577 1218 850"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>56-25330-Ethete...</td> <td>391</td> <td>1553</td> </tr> <tr> <td>56-28665-Fort W...</td> <td>549</td> <td>1759</td> </tr> <tr> <td>56-40555-Jeffrey...</td> <td>84</td> <td>58</td> </tr> <tr> <td>56-40945-Johnst...</td> <td>95</td> <td>242</td> </tr> <tr style="background-color: yellow;"> <td>56-48240-Lucern...</td> <td>254</td> <td>535</td> </tr> <tr> <td>56-59332-Owl Cr...</td> <td>2</td> <td>5</td> </tr> </tbody> </table> <p>Housing : 254 Population : 535</p> </div> <p>The housing and population numbers adjust dynamically with the removal of area. This changed from 219 housing and 451 populations to 254 and 535 respectively. The selected faces highlight in yellow.</p> <div data-bbox="397 1081 1396 1837" data-label="Image"> </div> <p>Note: The selected faces are outside of the CDP boundary because this is an add action.</p>	Info	Housing	Population	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58	56-40945-Johnst...	95	242	56-48240-Lucern...	254	535	56-59332-Owl Cr...	2	5
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Step	Action and Result																					
<p>Step 5</p>	<p>Click the Add Area button to apply boundary change (addition of faces/areas) to the selected CDP.</p> <div data-bbox="537 243 1256 930" data-label="Image"> <table border="1" data-bbox="570 554 1224 821"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>56-25330-Ethete...</td> <td>391</td> <td>1553</td> </tr> <tr> <td>56-28665-Fort W...</td> <td>549</td> <td>1759</td> </tr> <tr> <td>56-40555-Jeffrey...</td> <td>84</td> <td>58</td> </tr> <tr> <td>56-40945-Johnst...</td> <td>95</td> <td>242</td> </tr> <tr style="background-color: #0056b3; color: white;"> <td>56-48240-Lucern...</td> <td>254</td> <td>535</td> </tr> <tr> <td>56-59332-Owl Cr...</td> <td>2</td> <td>5</td> </tr> </tbody> </table> <p>Housing : 254 Population : 535</p> </div>	Info	Housing	Population	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58	56-40945-Johnst...	95	242	56-48240-Lucern...	254	535	56-59332-Owl Cr...	2	5
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<p>Step 6</p>	<p>Refer to the Map View to verify that GUPS captured the boundary change properly for the CDP. Zoom to the proper scale for viewing if the area added is small. If the boundary change is incorrect, Section 8.5.3 explains the process for removing area from a CDP.</p> <div data-bbox="407 1058 1386 1787" data-label="Image"> </div> <p>To reverse the boundary change, simply remove the area or perform the Undo action prior to saving. Refer to Table 13 and Table 18 for instructions on the Undo functionality.</p>																					

Step	Action and Result
Step 7	<p>Click the Save button to save the edits and update the project. The Current edits confirmation dialog box asks to save the changes for all layer(s). For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p> <div data-bbox="604 329 1192 600" data-label="Image"> </div> <p>Click OK to save or Cancel to return to the Map View without saving.</p>

8.5.3 Boundary Change – Remove Area (CDP)

Participants can perform boundary changes to CDPs by adding new area or removing an existing area. The **Boundary Change** action uses the faces layer to modify CDPs. CDP boundaries must follow physical boundaries (with some exceptions as mentioned in [Chapter 4](#)), so the use of imagery when performing this action is vital. If the removal of area dictates an attribute change, refer to the **Change Attributes** section for details on modifying the name of existing CDPs.

This section covers removing area from an existing CDP. [Table 47](#) explains the steps to remove area from an existing CDP.

Table 47: Boundary Change – Remove Area (CDP)

Step	Action and Result																								
Step 1	Follow steps from Table 45: Select Census Designated Place to open the project and select Census Designated Places for editing.																								
Step 2	<p>Within the Modify Area Feature window, click the Action drop-down menu to select Boundary Change.</p> <div data-bbox="591 1325 1182 1885" data-label="Image"> <table border="1"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>56-03000-Arapa...</td> <td>488</td> <td>1656</td> </tr> <tr> <td>56-04015-Atlanti...</td> <td>134</td> <td>37</td> </tr> <tr> <td>56-09307-Boulde...</td> <td>144</td> <td>408</td> </tr> <tr> <td>56-18225-Crowh...</td> <td>86</td> <td>141</td> </tr> <tr> <td>56-25330-Ethete...</td> <td>391</td> <td>1553</td> </tr> <tr> <td>56-28665-Fort W...</td> <td>549</td> <td>1759</td> </tr> <tr> <td>56-40555-Jeffrey...</td> <td>84</td> <td>58</td> </tr> </tbody> </table> </div>	Info	Housing	Population	56-03000-Arapa...	488	1656	56-04015-Atlanti...	134	37	56-09307-Boulde...	144	408	56-18225-Crowh...	86	141	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58
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Step	Action and Result
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Step 3	Double click to select a CDP from the Info column within the Modify Area Feature window. <i>The Map View zooms to the selected CDP to review and highlights it.</i>
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The screenshot shows the 'Modify Area Feature' window with the following settings:

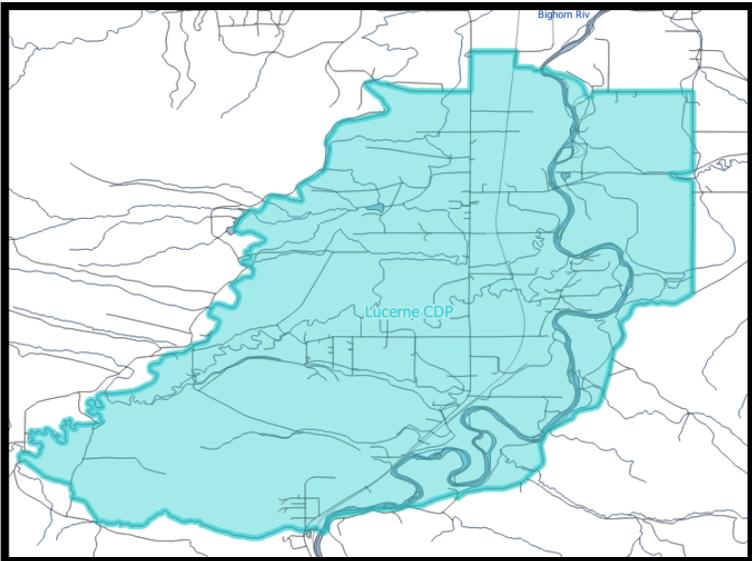
- Geography: Census Designated Place (CDP)
- Filter: No filter
- Action: Boundary Change

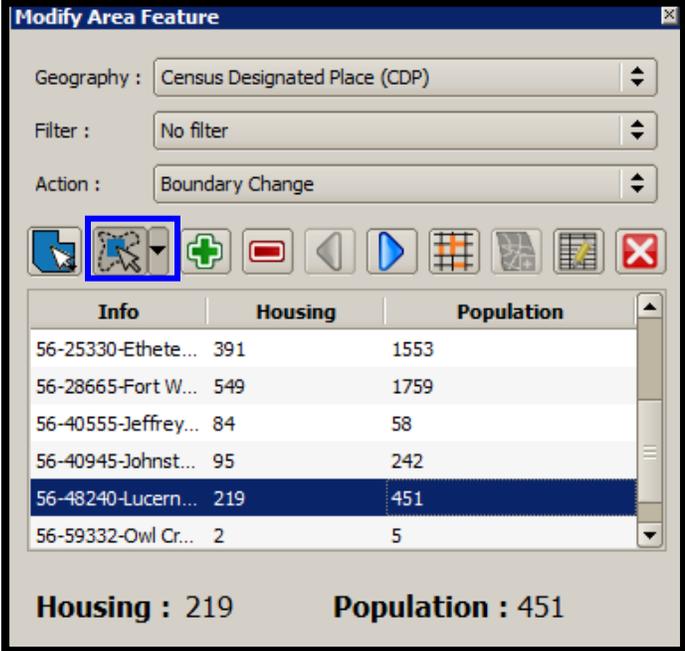
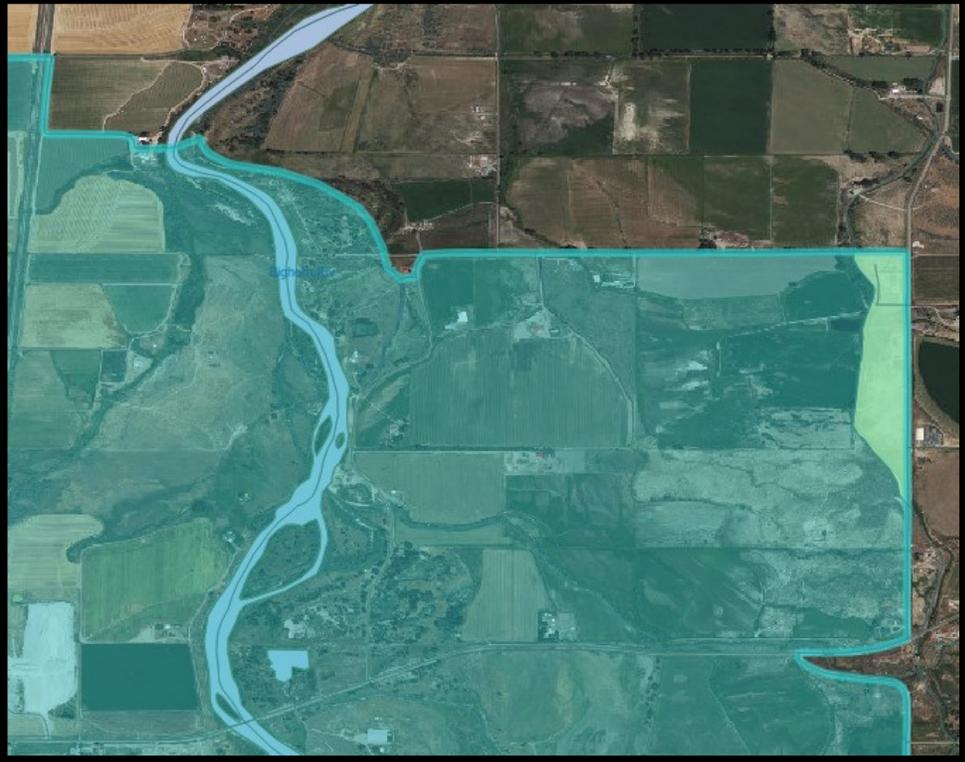
The table below shows the data for the selected CDP:

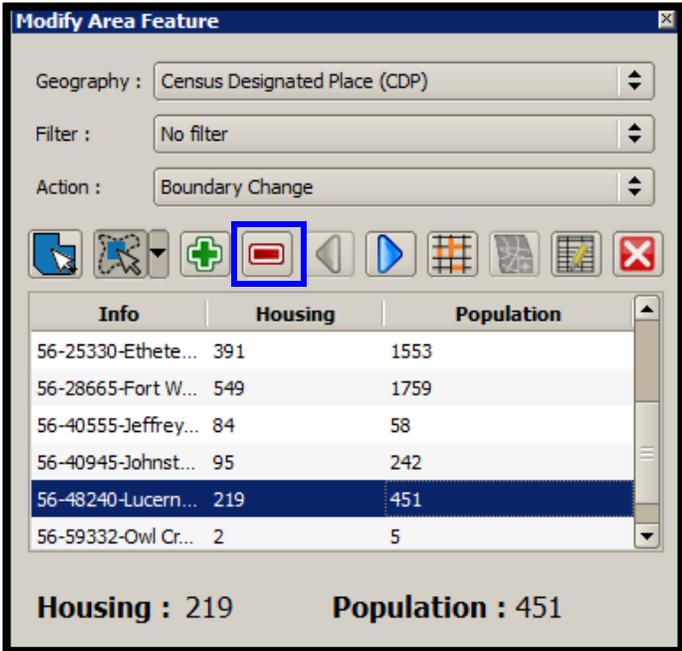
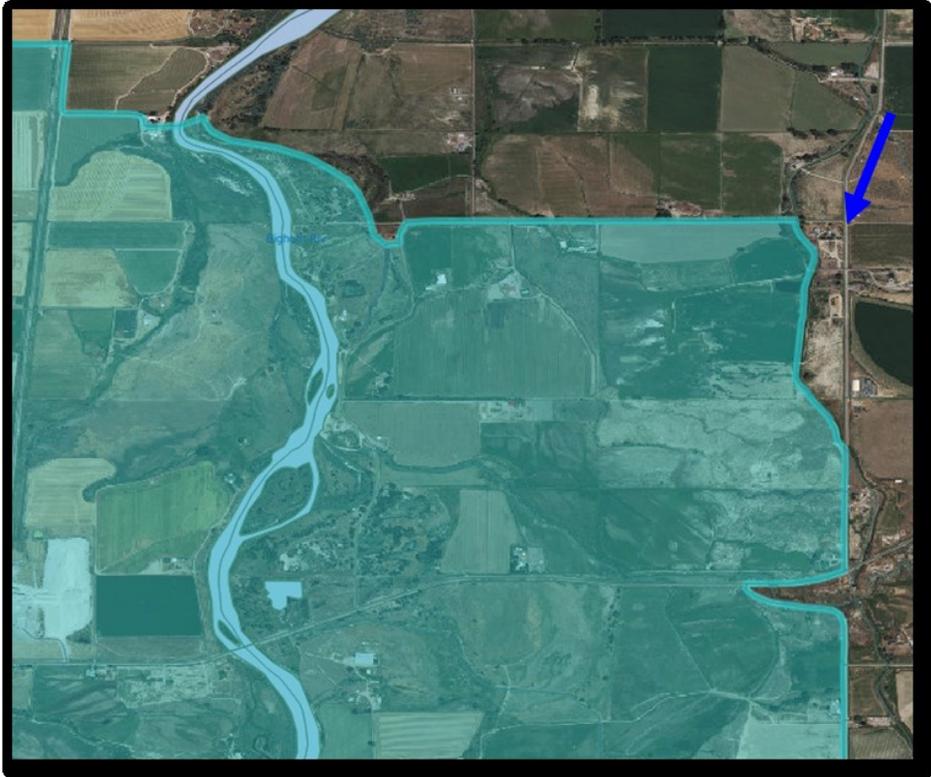
Info	Housing	Population
56-25330-Ethete...	391	1553
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56-40945-Johnst...	95	242
56-48240-Lucern...	254	535
56-59332-Owl Cr...	2	5

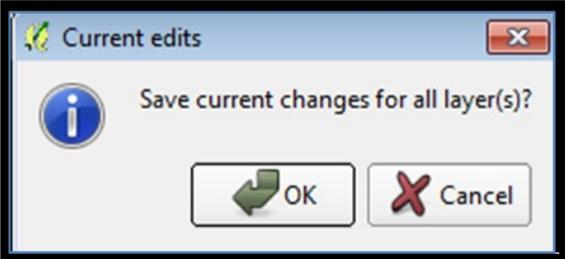
Summary statistics for the selected CDP:

Housing : 254 Population : 535



Step	Action and Result
<p>Step 6</p>	<p>Click the Select Feature(s) button to select the faces to remove from the CDP. Participants can choose any of the four choices beneath the Select Feature(s) button to accomplish the modification to the CDP. <i>This image depicts the Select Features by Freehand choice.</i></p>  <p><i>The housing and population numbers adjust dynamically with the removal of area. This changed from 254 housing and 535 populations to 219 and 451 respectively. The selected faces highlight in green.</i></p>  <p>Note: The selected faces are inside of the CDP boundary because this is a remove action.</p>

Step	Action and Result																					
<p>Step 7</p>	<p>Click the Remove Area button to apply boundary change (removal of faces/areas) from the selected CDP.</p>  <table border="1" data-bbox="570 569 1198 827"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>56-25330-Ethete...</td> <td>391</td> <td>1553</td> </tr> <tr> <td>56-28665-Fort W...</td> <td>549</td> <td>1759</td> </tr> <tr> <td>56-40555-Jeffrey...</td> <td>84</td> <td>58</td> </tr> <tr> <td>56-40945-Johnst...</td> <td>95</td> <td>242</td> </tr> <tr style="background-color: #e0e0e0;"> <td>56-48240-Lucern...</td> <td>219</td> <td>451</td> </tr> <tr> <td>56-59332-Owl Cr...</td> <td>2</td> <td>5</td> </tr> </tbody> </table> <p>Housing : 219 Population : 451</p>	Info	Housing	Population	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58	56-40945-Johnst...	95	242	56-48240-Lucern...	219	451	56-59332-Owl Cr...	2	5
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<p>Step 8</p>	<p>Refer to the Map View to verify that GUPS captured the boundary change properly for the CDP. Zoom to the proper scale if the area is small. If the boundary change is incorrect, the previous section on Boundary Change explains the process for adding area to a CDP.</p>  <p>To reverse the boundary change, simply add the area back to the CDP or perform the Undo action prior to saving. Refer to Table 13 and Table 18 for instructions on the Undo functionality.</p>																					

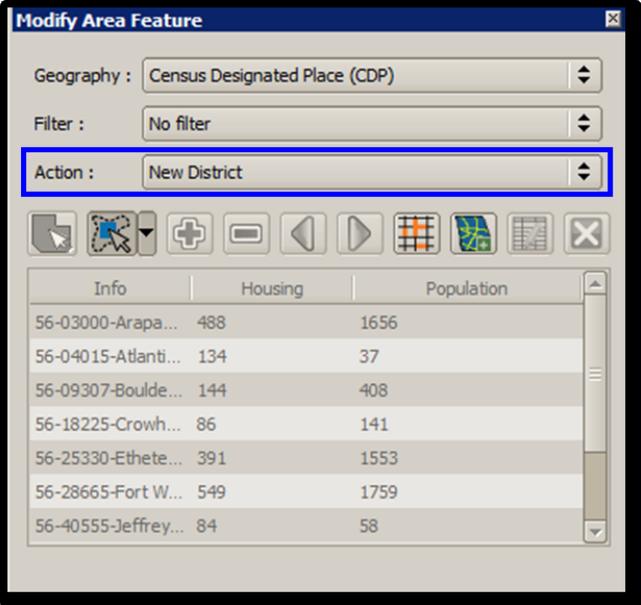
Step	Action and Result
Step 9	<p>Click the Save button to save the edits and update the project. The Current edits confirmation dialog box asks to save the changes for all layer(s). For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p>  <p>Click OK to save or Cancel to return to the Map View without saving.</p>

8.5.4 New District – Add Entity (Add a New CDP)

Participants can add new CDPs as part of their PSAP work. As with adding area or removing area from an existing CDP, the **New District** action uses the faces layer to add new CDPs. CDP boundaries must follow physical boundaries (with some exceptions as mentioned in [Chapter 4](#)), so the use of imagery when performing this action is vital.

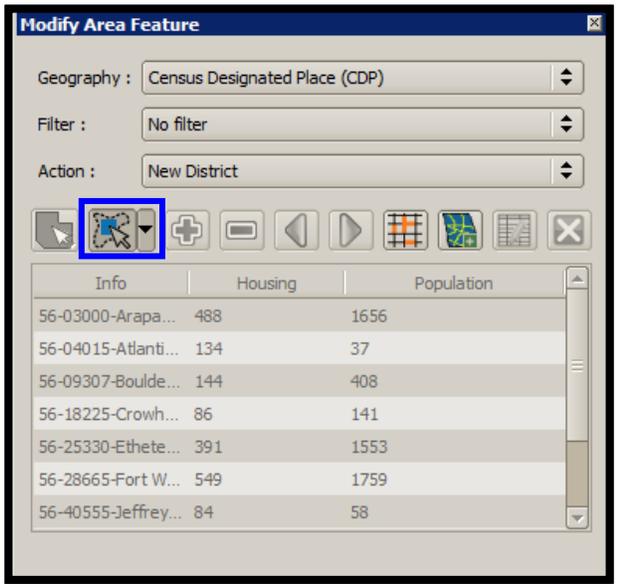
This section covers adding a new CDP. [Table 48](#) explains the steps to add new CDP using the faces layer.

Table 48: New District – Add Entity (Add a New CDP)

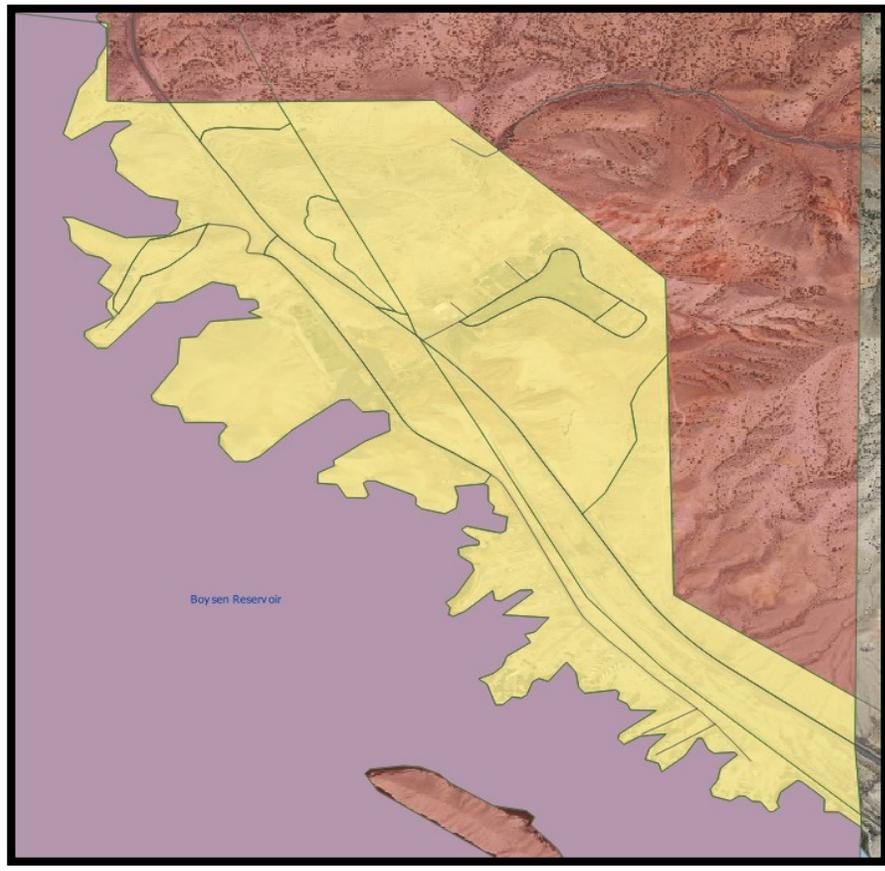
Step	Action and Result																								
Step 1	Follow steps from Table 45: Select Census Designated Place to open the project and select Census Designated Places for editing.																								
Step 2	<p>Within the Modify Area Feature window, click the Action drop-down menu to select New District.</p>  <table border="1" data-bbox="597 1476 1182 1749"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>56-03000-Arapa...</td> <td>488</td> <td>1656</td> </tr> <tr> <td>56-04015-Atlanti...</td> <td>134</td> <td>37</td> </tr> <tr> <td>56-09307-Boulde...</td> <td>144</td> <td>408</td> </tr> <tr> <td>56-18225-Crowh...</td> <td>86</td> <td>141</td> </tr> <tr> <td>56-25330-Ethete...</td> <td>391</td> <td>1553</td> </tr> <tr> <td>56-28665-Fort W...</td> <td>549</td> <td>1759</td> </tr> <tr> <td>56-40555-Jeffrey...</td> <td>84</td> <td>58</td> </tr> </tbody> </table> <p>View the existing CDPs in the Map View window and determine if any are missing. To determine if a CDP is missing, use the Zoom In button and the Pan button on the Standard toolbar to zoom and pan around the tribal entity.</p>	Info	Housing	Population	56-03000-Arapa...	488	1656	56-04015-Atlanti...	134	37	56-09307-Boulde...	144	408	56-18225-Crowh...	86	141	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58
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56-28665-Fort W...	549	1759																							
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Step	Action and Result
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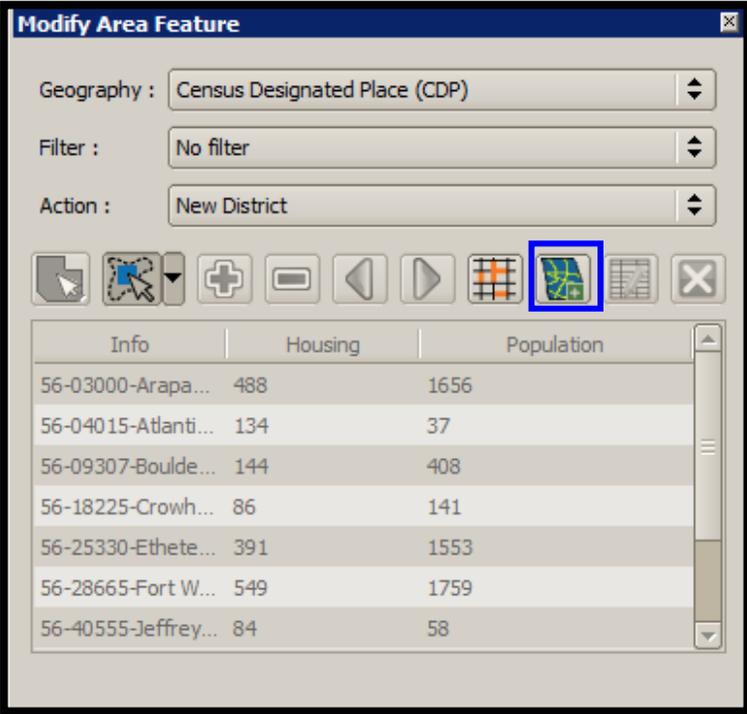
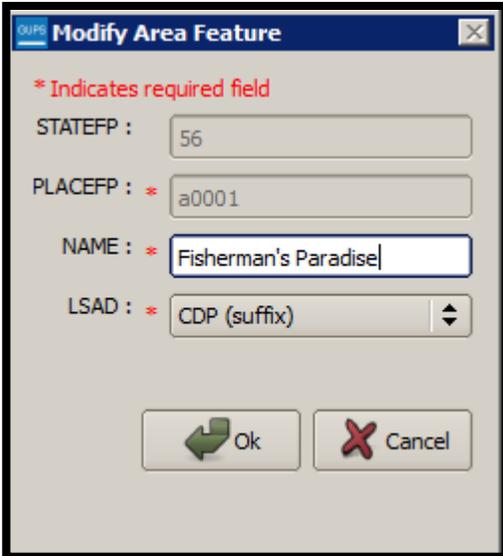
Step 3	Click the Select Feature(s) button to select the faces to add to the new CDP. Participants can choose any of the four choices beneath the Select Feature(s) button to accomplish the creation of the new CDP. <i>This image depicts the Select Features by Freehand choice.</i>
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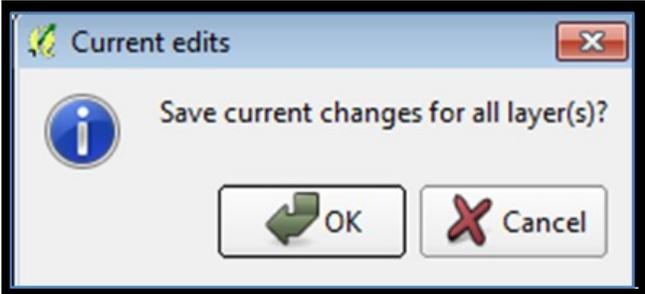


The selected faces highlight in yellow. This step depicts imagery.



Note: Select faces that do not belong to an existing CDP area.

Step	Action and Result																								
<p>Step 4</p>	<p>Click the Add Entity button to create a new CDP.</p>  <table border="1" data-bbox="537 562 1230 894"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>56-03000-Arapa...</td> <td>488</td> <td>1656</td> </tr> <tr> <td>56-04015-Atlanti...</td> <td>134</td> <td>37</td> </tr> <tr> <td>56-09307-Boulde...</td> <td>144</td> <td>408</td> </tr> <tr> <td>56-18225-Crowh...</td> <td>86</td> <td>141</td> </tr> <tr> <td>56-25330-Ethete...</td> <td>391</td> <td>1553</td> </tr> <tr> <td>56-28665-Fort W...</td> <td>549</td> <td>1759</td> </tr> <tr> <td>56-40555-Jeffrey...</td> <td>84</td> <td>58</td> </tr> </tbody> </table>	Info	Housing	Population	56-03000-Arapa...	488	1656	56-04015-Atlanti...	134	37	56-09307-Boulde...	144	408	56-18225-Crowh...	86	141	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58
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<p>Step 5</p>	<p>The Modify Area Feature window opens. Enter the Name of the newly created CDP and then click the OK button.</p> 																								

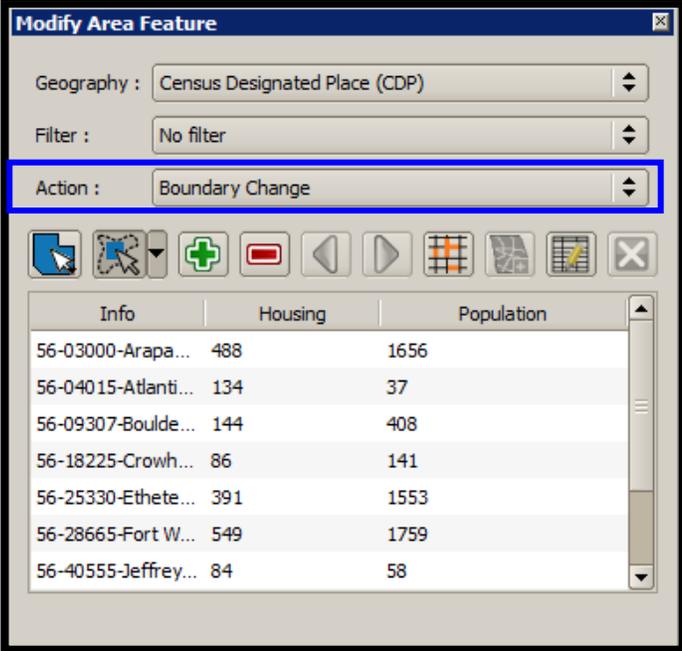
Step	Action and Result
<p>Step 6</p>	<p>Refer to the Map View to verify that GUPS captured the new CDP properly. Zoom to the proper scale to confirm the boundaries and area of the CDP. If CDP is incorrect, the previous two sections on Boundary Change explain the process to use for modifying the newly created CDP.</p>  <p>The image is an aerial photograph of a desert landscape. A cyan-colored boundary outlines a specific area labeled 'Fisherman's Paradise CDP'. To the west and south of this area is a large body of water labeled 'Boysen Reservoir'. The terrain is arid with some sparse vegetation and a road or canal running through the area.</p>
<p>Step 7</p>	<p>Click the Save button to save the edits and update the project. <i>The Current edits confirmation dialog box asks to save the changes for all layer(s).</i> For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p>  <p>The image shows a software dialog box titled 'Current edits'. It contains an information icon (i) and the text 'Save current changes for all layer(s)?'. At the bottom, there are two buttons: 'OK' with a green checkmark icon and 'Cancel' with a red X icon.</p> <p>Click OK to save or Cancel to return to the Map View without saving.</p>

8.5.5 Boundary Change – Delete Area Feature (Delete an Existing CDP)

Participants can delete existing CDPs as part of their PSAP work. Before deleting an existing CDP, participants should ensure that none of the characteristics described in [Chapter 4](#) exist for the CDP under consideration for deletion. Presence of those characteristics leads to retention of the existing CDP. Pending review of the submission, the Census Bureau may disapprove of the deletion and retain CDPs proposed for deletion by participants.

This section covers deleting an existing CDP. [Table 49](#) explains the steps to remove an existing CDP.

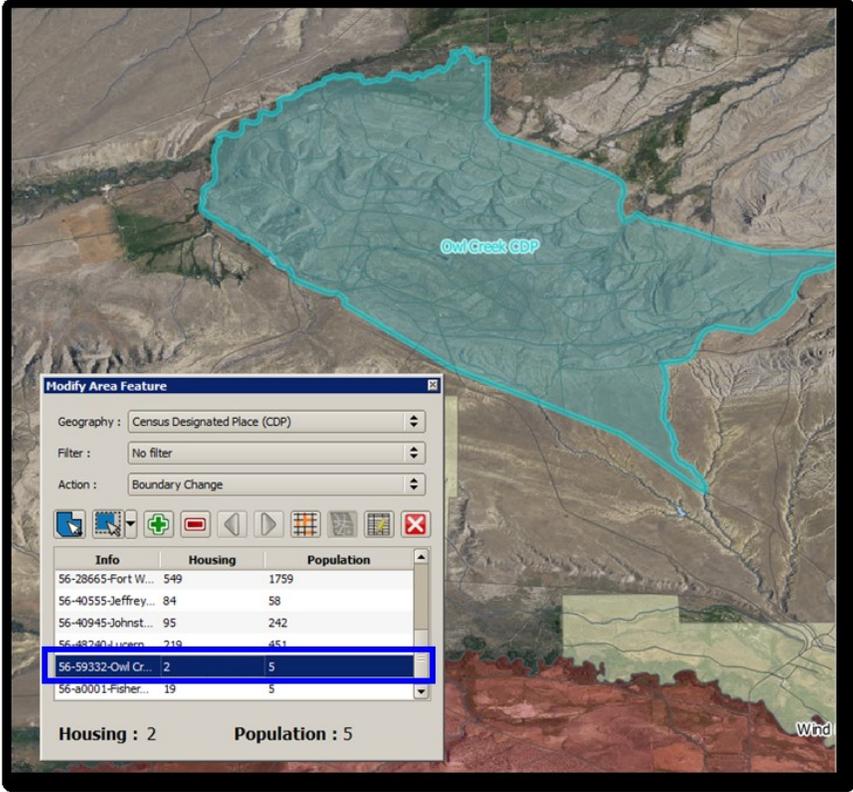
Table 49: Boundary Change – Delete Area Feature (Delete an Existing CDP)

Step	Action and Result																								
Step 1	Follow steps from Table 45: Select Census Designated Place to open the project and select Census Designated Places for editing.																								
Step 2	<p>Within the Modify Area Feature window, click the Action drop-down menu to select Boundary Change.</p>  <table border="1" data-bbox="570 1052 1198 1346"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>56-03000-Arapa...</td> <td>488</td> <td>1656</td> </tr> <tr> <td>56-04015-Atlanti...</td> <td>134</td> <td>37</td> </tr> <tr> <td>56-09307-Boulde...</td> <td>144</td> <td>408</td> </tr> <tr> <td>56-18225-Crowh...</td> <td>86</td> <td>141</td> </tr> <tr> <td>56-25330-Ethete...</td> <td>391</td> <td>1553</td> </tr> <tr> <td>56-28665-Fort W...</td> <td>549</td> <td>1759</td> </tr> <tr> <td>56-40555-Jeffrey...</td> <td>84</td> <td>58</td> </tr> </tbody> </table>	Info	Housing	Population	56-03000-Arapa...	488	1656	56-04015-Atlanti...	134	37	56-09307-Boulde...	144	408	56-18225-Crowh...	86	141	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58
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Step	Action and Result
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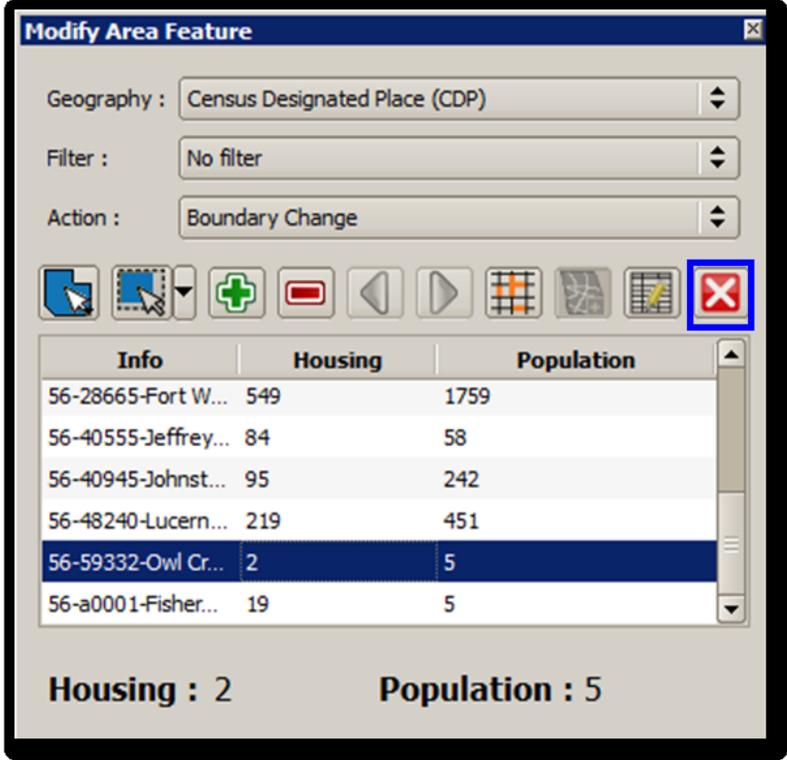
Step 3

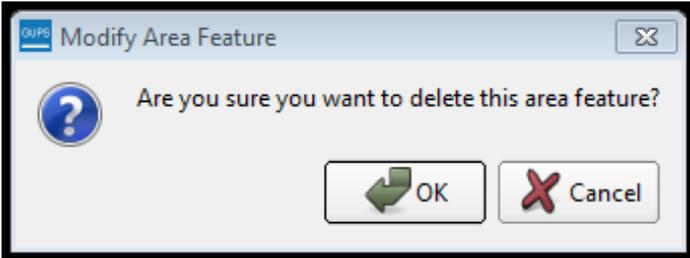
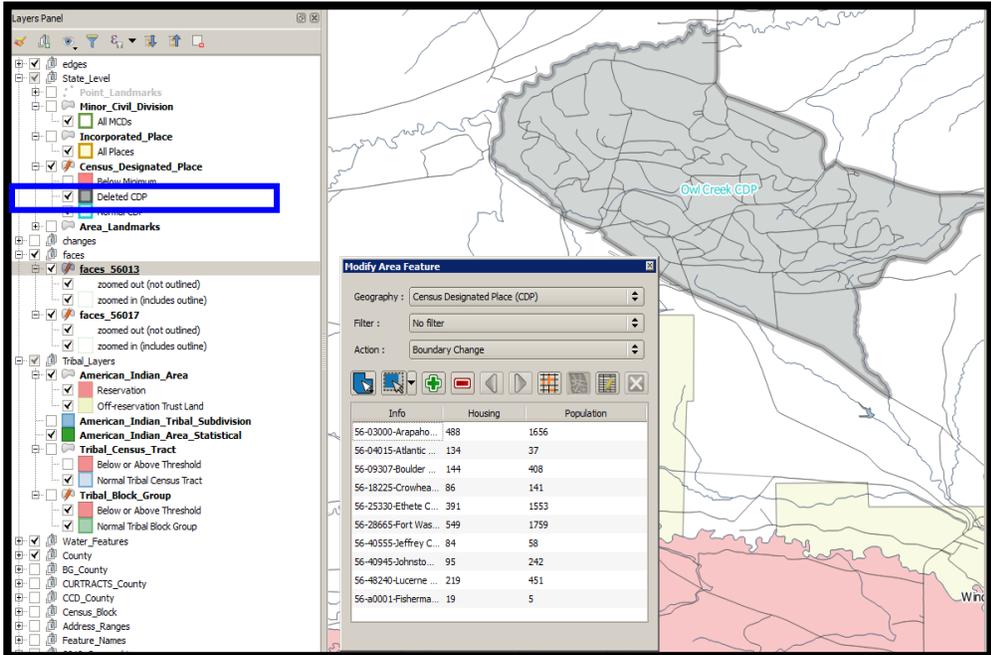
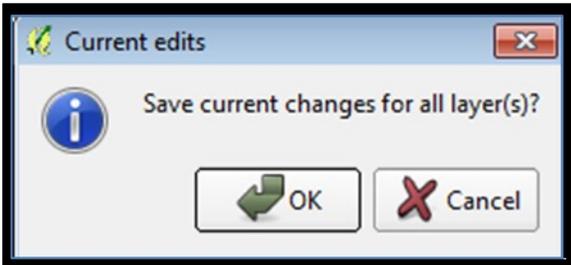
Double click to select the CDP to delete from the **Info** column within the **Modify Area Feature** window. *The **Map View** zooms to the selected CDP to review and highlights it. This step depicts imagery.*



Step 4

Click the **Delete Area Feature** button to delete the CDP from the list.

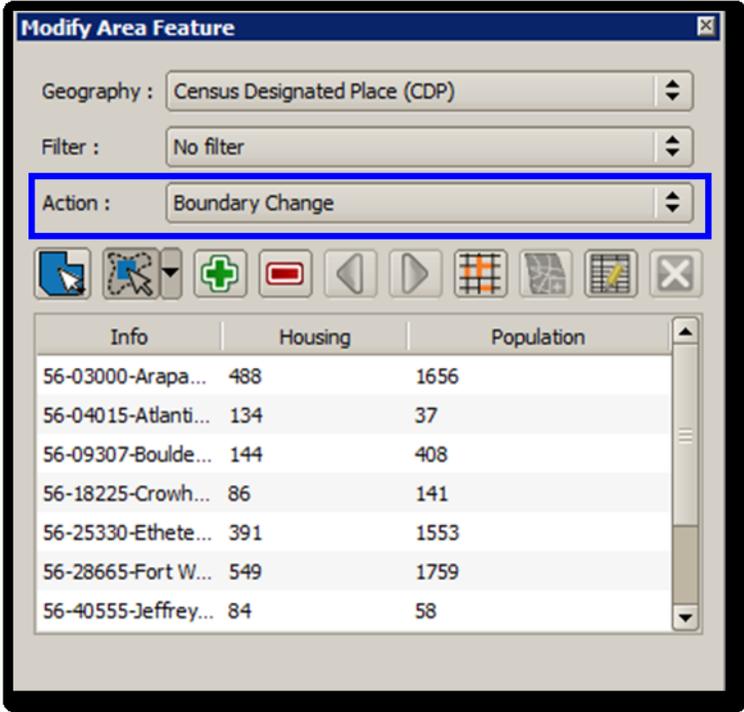


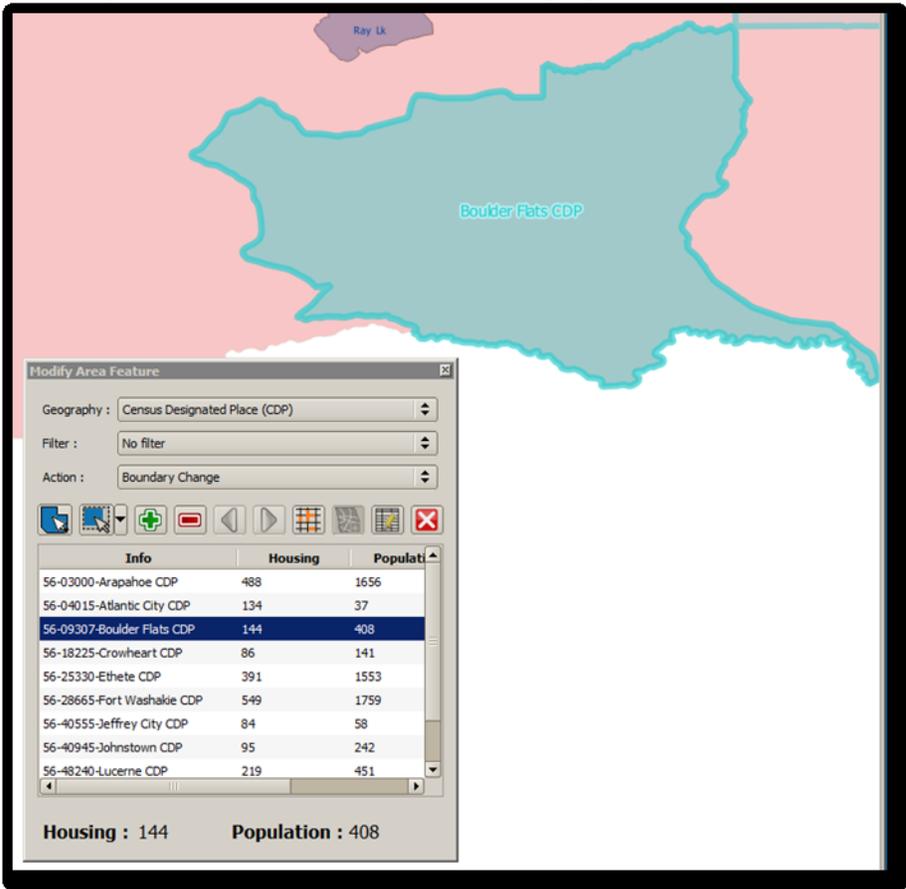
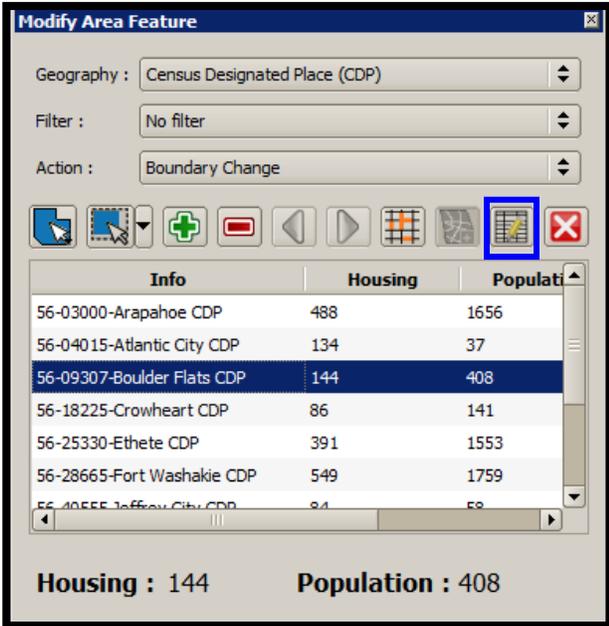
Step	Action and Result
<p>Step 5</p>	<p>The Modify Area Feature confirmation dialog box displays to verify the deletion of this area feature. Click OK if satisfied with the deletion. Click Cancel to discard the deletion.</p>  <p>For this example, click the OK button to continue.</p>
<p>Step 6</p>	<p>Refer to the Modify Area Feature tool to verify that GUPS deleted the CDP (<i>Oak Creek CDP is not listed below</i>) and the Table of Contents to confirm the presence of the deleted CDP in the layer of the same name. Zoom to the proper scale to confirm the deletion. If participants decide the CDP deletion was incorrect, they should perform the Undo action prior to saving. If they save and then realize a mistake, the previous section on New District – Add Entity (Add a new CDP) explains the process to use for adding the deleted CDP back into the tribal entity.</p> 
<p>Step 7</p>	<p>Click the Save button to save the edits and update the project. The Current edits confirmation dialog box asks to save the changes for all layer(s). For more information on saving, please refer to Section 6.3, Save a Project in GUPS.</p>  <p>Click OK to save or Cancel to return to the Map View without saving.</p>

8.5.6 Boundary Change – Change Attributes (CDP)

Using the **Boundary Change** action, participants can perform attribute updates on existing CDPs. Attributes that can be modified include the **NAME**, **JUSTIFY**, and **JSTFY_NAME** fields. Refer to [Chapter 4](#) for naming rules and recommendations. When a participant changes an existing CDP name or creates a new CDP, then the **JSTFY_NAME** field becomes required. The participant uses the field to provide reasoning for the chosen name. Participants may also use the **JUSTIFY** field to provide additional reasoning for the name change to an existing CDP or creating a new CDP. If participants make substantial changes to the boundaries of an existing CDP, then the Census Bureau recommends the modification of the name or a strong justification for retaining the name. [Table 50](#) explains the steps to change the attributes an existing CDP where no changes, other than the name, are necessary.

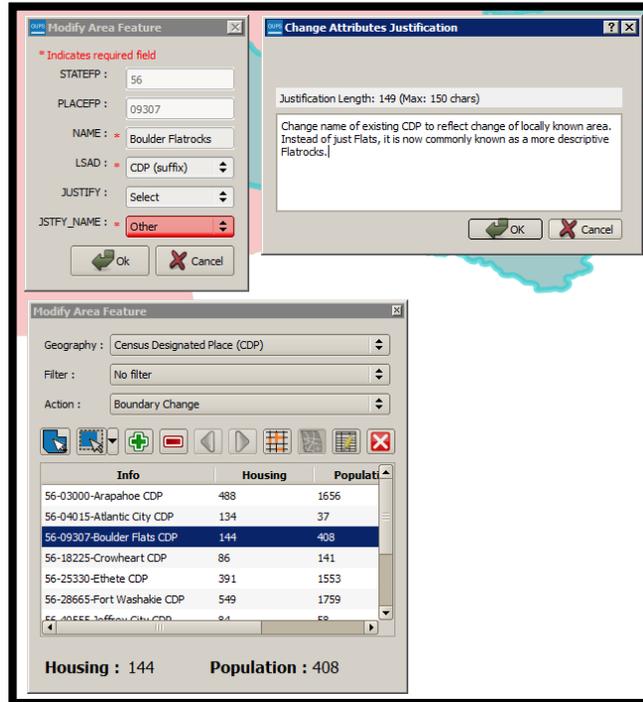
Table 50: Boundary Change – Change Attributes (CDP)

Step	Action and Result																								
Step 1	Follow steps from Table 45: Select Census Designated Place to open the project and select Census Designated Places for editing.																								
Step 2	<p>Within the Modify Area Feature window, click the Action drop-down menu to select Boundary Change.</p>  <table border="1" data-bbox="548 1161 1227 1482"> <thead> <tr> <th>Info</th> <th>Housing</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>56-03000-Arapa...</td> <td>488</td> <td>1656</td> </tr> <tr> <td>56-04015-Atlanti...</td> <td>134</td> <td>37</td> </tr> <tr> <td>56-09307-Boulde...</td> <td>144</td> <td>408</td> </tr> <tr> <td>56-18225-Crowh...</td> <td>86</td> <td>141</td> </tr> <tr> <td>56-25330-Ethete...</td> <td>391</td> <td>1553</td> </tr> <tr> <td>56-28665-Fort W...</td> <td>549</td> <td>1759</td> </tr> <tr> <td>56-40555-Jeffrey...</td> <td>84</td> <td>58</td> </tr> </tbody> </table>	Info	Housing	Population	56-03000-Arapa...	488	1656	56-04015-Atlanti...	134	37	56-09307-Boulde...	144	408	56-18225-Crowh...	86	141	56-25330-Ethete...	391	1553	56-28665-Fort W...	549	1759	56-40555-Jeffrey...	84	58
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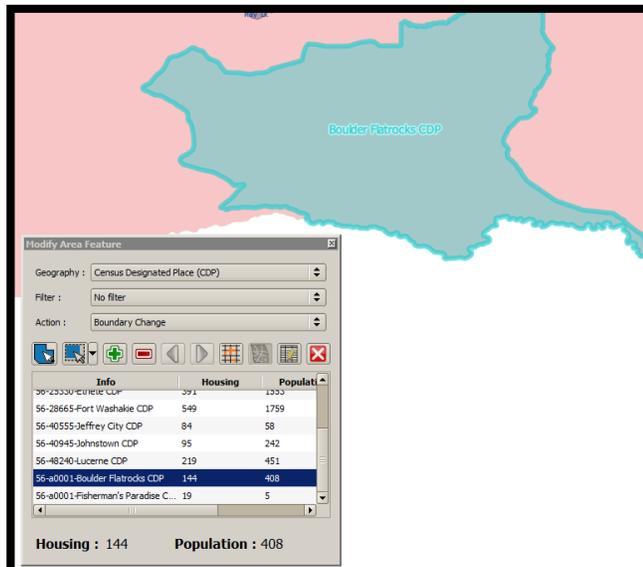
Step	Action and Result
<p>Step 3</p>	<p>Double click to select the CDP to modify from the Info column within the Modify Area Feature window. <i>The Map View zooms to the selected CDP and highlights it.</i></p> 
<p>Step 4</p>	<p>Click the Change Attributes button to modify the CDPs attributes.</p> 

Step	Action and Result
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Step 5 The **Modify Area Feature** window displays. Enter the required data (fields with the red asterisks). GUPS pre-populates the **Name** field with the selected CDP name and the **LSAD** field defaults to the geography selected. In this case, CDP. The **NAME**, **JUSTIFY**, and **JSTFY_NAME** fields can be updated. When finished, press **OK**.



Note: To change the name of an existing CDP, follow the CDP naming criteria outline in [Chapter 4](#). Participants must provide justification such as the community has officially renamed (e.g., Tyson’s Corner VA rebranded itself as Tysons VA). Signage and other proof should exist to confirm the renaming.



CHAPTER 9. VALIDATE DATA AND PREPARE FILES FOR SUBMISSION

As introduced in [Part 2](#), GUPS provides validation tools to help review and validate the updates made to statistical geographies by participants. The next three sections describe the three tools necessary to validate the PSAP data prior to submission to the Census Bureau: [TSR Criteria Review Tool](#), the [Review Change Polygons Tool](#), and the [Geography Review Tool](#). Each of the three tools function differently to give participants the opportunity to verify, fix, justify, and assure the quality of the final exported project. GUPS also provides the [Export to Zip Button](#), to prepare data for sharing with other reviewers and/or submitting to the Census Bureau.

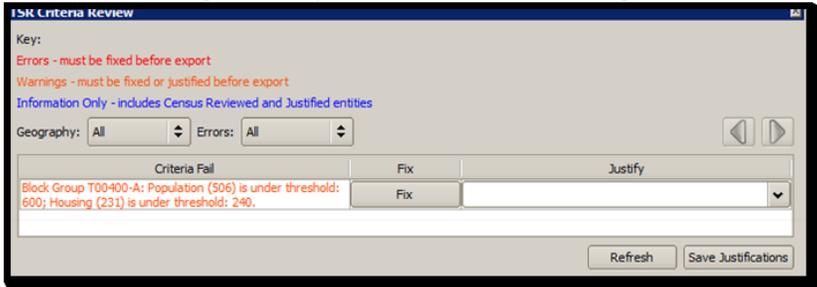
The Census Bureau recommends executing these tools in the order presented for the next three sections. Run the TSR Criteria Review Tool first, then the Review Change Polygons Tool, and finish with the Geography Review Tool.

IMPORTANT: If, after conducting a review, participants determine no updates are necessary, skip to [Part 1](#) to learn more about the next steps for 2020 Census PSAP.

9.1 TSR Criteria Review Tool

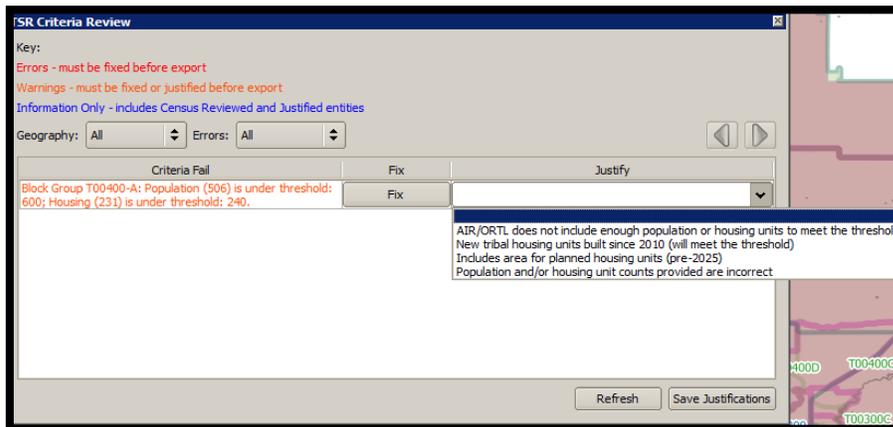
Participants use the **TSR Criteria Review** tool to generate a list of threshold failures and correct (labeled as “fix” in the tool) the failures or provide a justification for the failure. GUPS color-codes the list of failures: Participants must correct red errors in tribal census tracts and tribal block groups. They must correct orange errors or justify them to remain as such. Participants can correct the issues or provide a justification of their own to retain the geography based on local knowledge. Run this required check before creating a data output file for submission to the Census Bureau. [Section 7.4.2.4](#) introduced this tool.

Table 51: TSR Criteria Review Button

Step	Action and Result
Step 1	Download and Review the data as described in Section 6.2 Open GUPS and Start a New Project .
Step 2	<p>Click the TSR Criteria Review button.</p>  <p>A TSR Criteria Review dialog box opens to inform participants that it is actively reviewing the population and housing unit criteria for all the Geographic entities in the tribal entity. Once the tool has run, the TSR Criteria Review window displays the remaining issues. Participants can choose to display the list by Geography type, error type, or display all the geographies. The list contains the geographic entities that do not meet thresholds or missing other requirements such as noncontiguous entities.</p> 
Step 3	If the exceedance of the threshold as displayed in the Criteria Fail is justified, select the justification using the drop-down button in the Justify attribute field. Choose one of the pre-determined

Step	Action and Result
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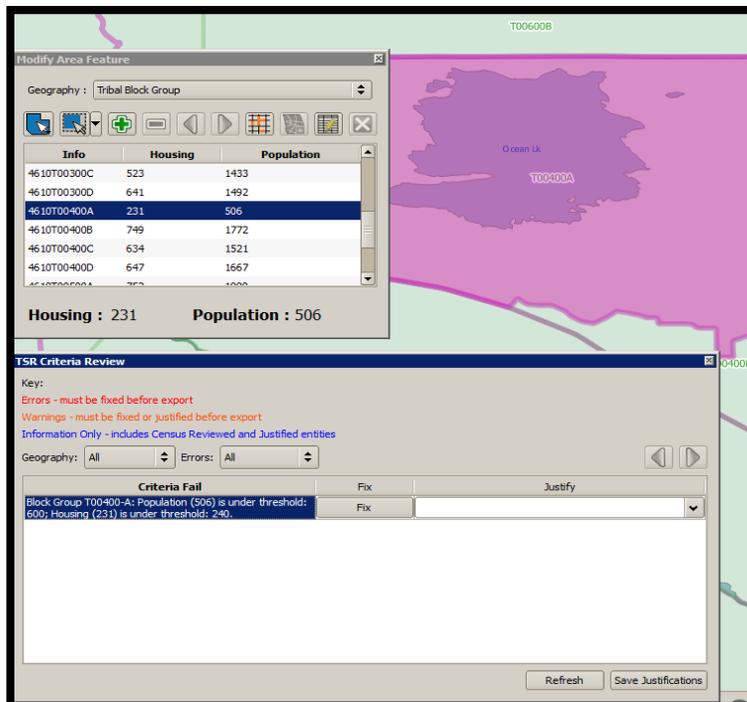
justifications or enter something unique. There is a 150-character limit to this field. Be sure to save frequently by clicking the **Save Justifications** button at the bottom of the window.



Note: Many of the tribal participants AIR/ORL fall beneath the threshold criteria and there is no geographic resolution that will correct the failure. Choosing the first justification is the best choice in those instances, as there is no way to “fix” the geography. In other instances, growth or planned growth is expected or the 2010 figures supplied by the Census Bureau are incorrect per the tribal participant.

Step 4	Action and Result
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If the failure needs correction, click the **Fix** button for any of the geographic entities within the **TSR Criteria Review** window list, *GUPS* zooms to the **Map View** of the selected geographic entity, opens the **Modify Area Feature** tool, and then selects the entity within the **Modify Area Feature** window. From here, choose an **Action** within the **Modify Area Feature** tool and perform the edits necessary to meet the requirements and resolve the failure (merge or split). Refer to [Section 7.4.2.1](#), the **Modify Area Feature** tool section, for detail on its functionality.

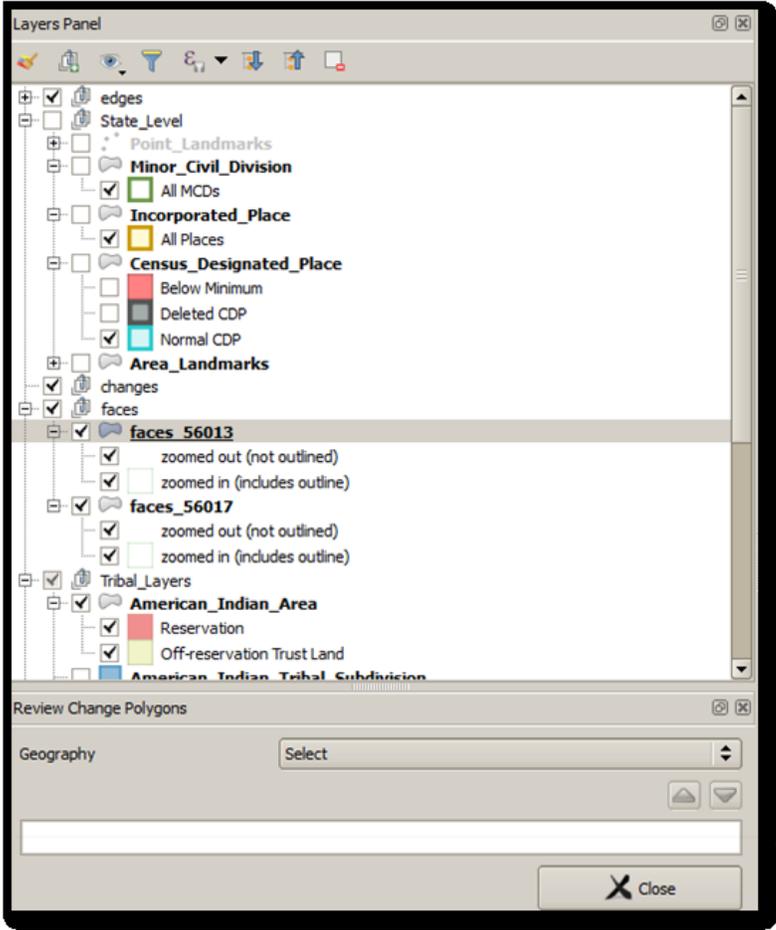


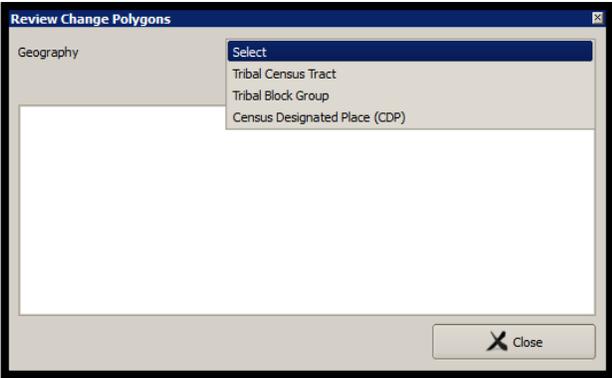
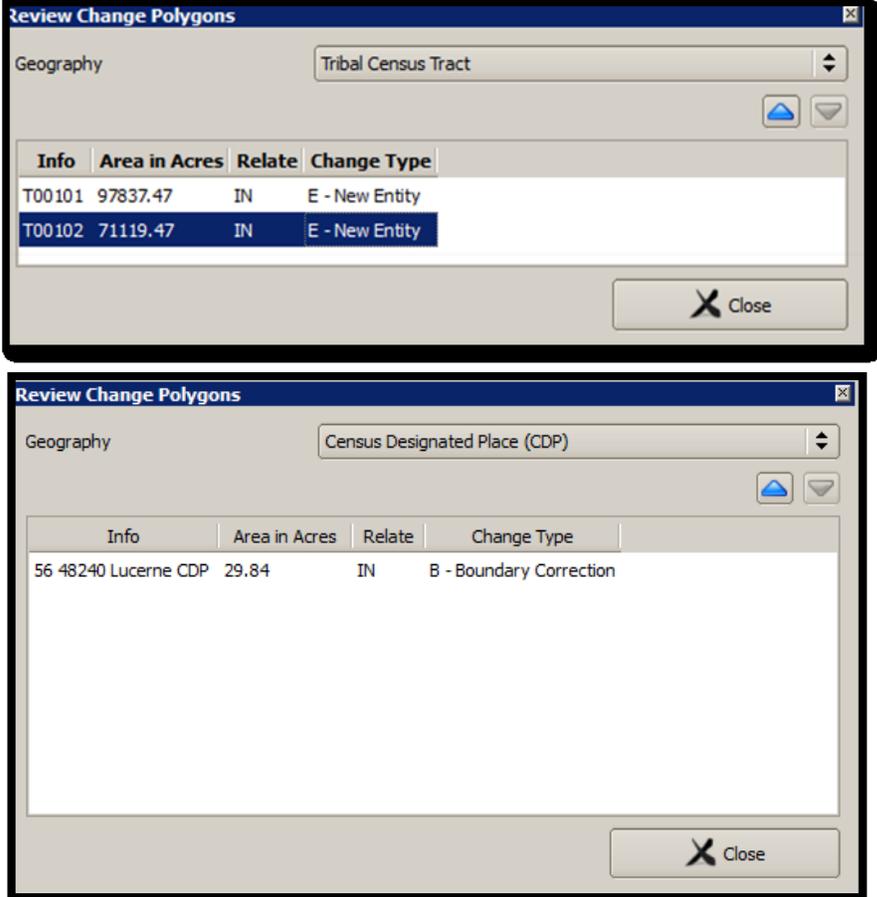
Step	Action and Result
Step 5	Once participants correct or justify all failures, participants can close the tool by clicking the “x” in the top right hand corner of the window. Refreshing the window is beneficial as work is underway. Click the Refresh button at the bottom of the window next to the Save Justifications button to refresh the results of executing the tool.

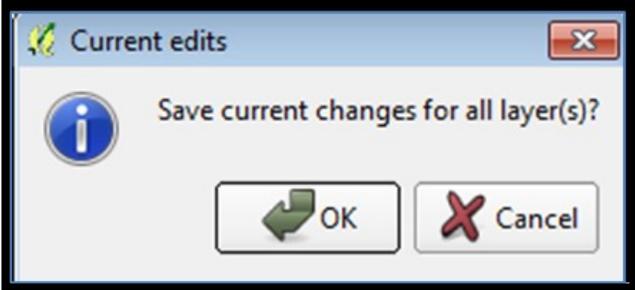
9.2 Review Change Polygons Tool

The **Review Change Polygons** tool reviews transaction polygons for tribal census tracts, tribal block groups, and CDPs. It provides a list of their applied changes (boundary changes, splits, merges). Participants use this tool to check the general accuracy of the change polygons in the **Map View** by clicking each change within the list. [Section 7.4.2.3](#) introduced this tool.

Table 52: Review Change Polygons Button

Step	Action and Result
Step 1	Download and review the data as described in Section 6.2, Open GUPS and Start a New Project .
Step 2	<p>Click the Review Change Polygons button.</p>  <p>The Review Change Polygons dialog box opens just beneath the Table of Contents. The dialog box can be moved anywhere, even out of the GUPS window onto a dual monitor. It does not have to remain beneath the Table of Contents.</p> 
Step 3	Select the statistical geography to review from the Geography drop-down menu.

Step	Action and Result
	
<p>Step 4</p>	<p>The full list of geographies with modifications appear after selecting the geography to review. For this example, Tribal Census Tract is the selected geography. The review change polygons list includes only the “new entity” records for a tribal census tract split. The CDP geography choice shows a boundary correction. The type of changes varies based on the geography selected. See Table 32 for information on change types. The Change Type field shown below depicts a single letter, where “E” denotes a split, “M” denotes a merge, “B” denotes a boundary change, and “G” denotes an attribute change.</p> 
	<p>Refresh the change polygon list by switching geography types. Doing so repopulates the list with the current list of polygon changes.</p>
<p>Step 5</p>	<p>To view a change polygon on the map, click the row for the polygon in the Info list. <i>The polygon highlights and the map zooms to the location.</i></p>

Step	Action and Result
Step 6	To correct a mistake (e.g., correct a noncontiguous polygon or sliver missed during the splitting/merging of a geography), or review changes made during the participant's review (e.g., creation of a new CDP), click on the Modify Area Feature button on the PSAP toolbar and make the correction. Refer to Section 8.2.1, Modify Area Feature Tool , for the instructions.
Step 7	Click the Save button to save the edits and update the project. <i>The Current edits confirmation dialog box asks to save the current changes for all layers.</i> For more information on saving, please refer to Section 6.3, Save a Project in GUPS . 
Step 8	Click OK to save or Cancel to return to the Map View without saving. Upon completion of the review and update to the geographies, click the Close button in the Review Change Polygons window to close the tool.

9.3 Geography Review Tool

The **Geography Review Tool** provides access to the attribute tables of some of the layers displayed in the **Table of Contents**. It filters the map layers based on field values in the attribute table. This tool provides an overall review of the new or deleted entities, or the entities with boundary changes. The Census Bureau recommends the use of this tool, rather than directly editing the various statistical geographies attribute tables. [Section 7.4.2.2](#) introduced this tool.

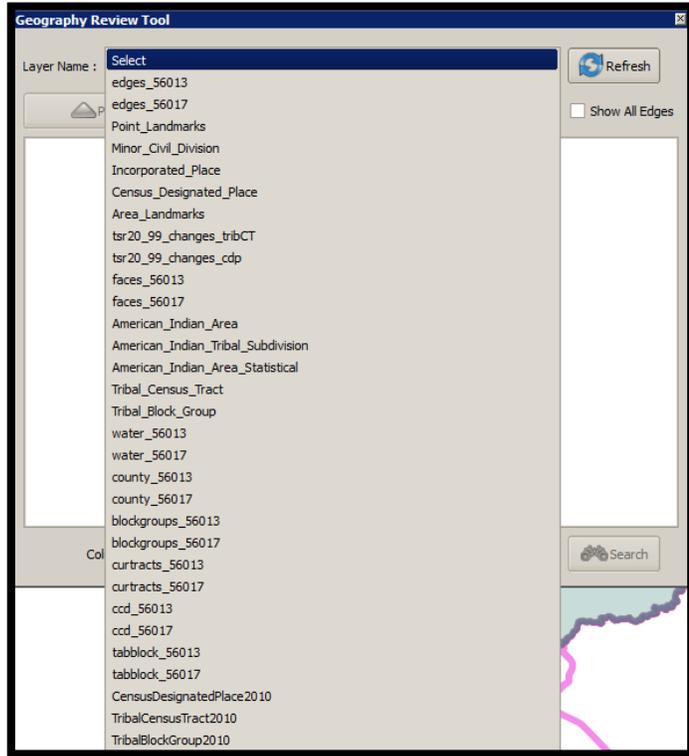
Table 53: Geography Review Tool Button

Step	Action and Result
Step 1	Download and review the data as described in Section 6.2, Open GUPS and Start a New Project .
Step 2	Click the Geography Review Tool button on the PSAP toolbar . 
	<i>The Geography Review Tool dialog box opens.</i>

Step	Action and Result
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Step 3

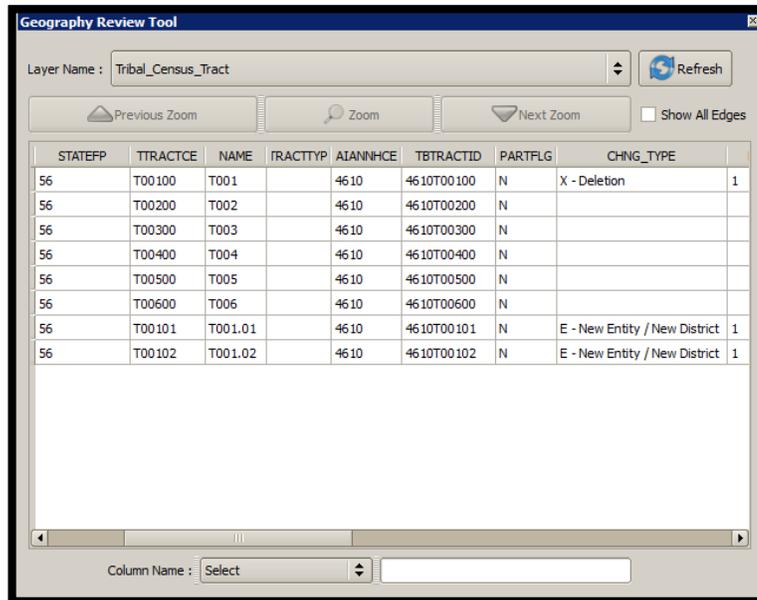
In the **Layer Name:** field drop-down menu, select the data layer to view.

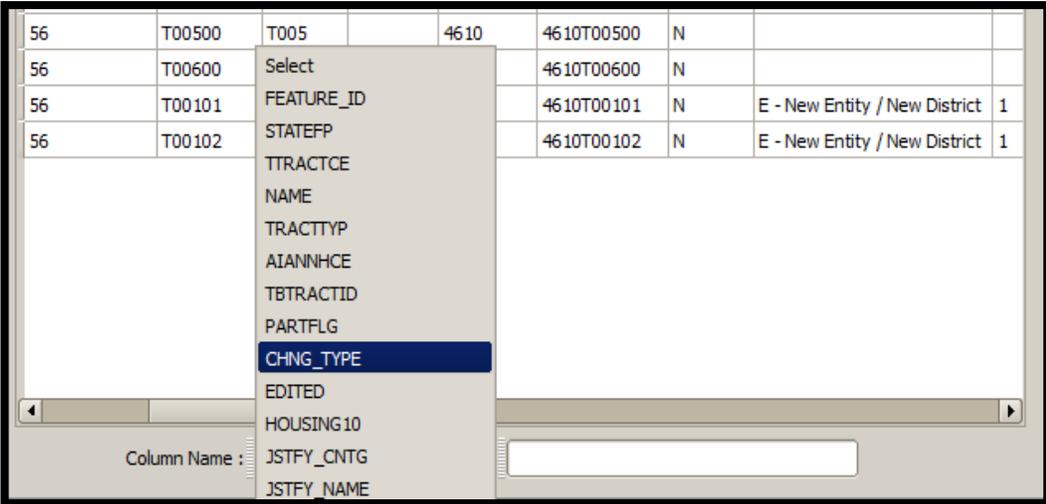
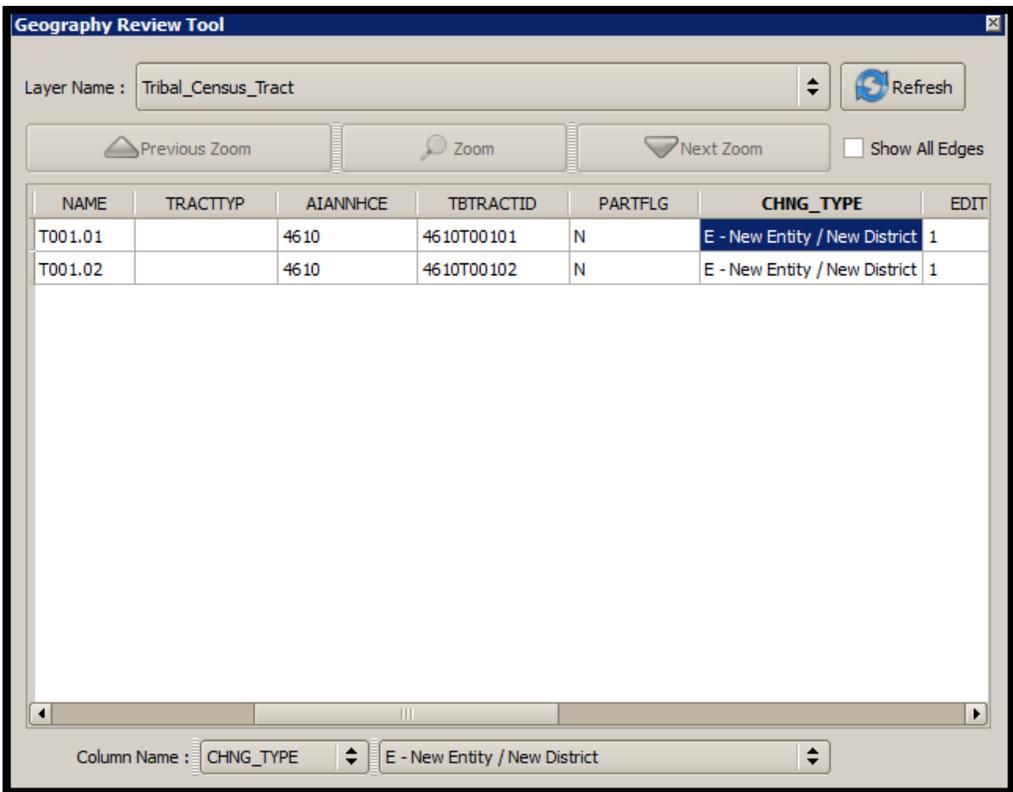


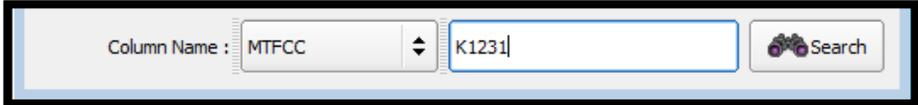
The geography (e.g., layers) modified during PSAP that need to be reviewed are as follows (listed in alpha order, not priority order):

- Census designated places (Census_Designated_Place, if they exist in the counties within which the tribal entity falls).
- Tribal block groups (Tribal_Block_Groups)
- Tribal census tracts (Tribal_Census_Tract)

Once selected, the attribute table for the layer opens, with the individual geographies (each tribal census tract for this example) in separate rows and specific attributes displayed in separate columns.



Step	Action and Result																					
	If columns are not visible in the attribute data table, drag the edge of the dialog box outward to widen the view, or move the dialog box to another location by clicking inside the box and dragging it.																					
Step 4	<p>Use the Search feature at the bottom of the dialog box to filter the table layers by specific attributes (e.g., full name, MTFCC, change type, etc.). This example uses CHNG_TYPE.</p>  <p>Participants can run this tool with this specific column name selected to identify the changes made during their review.</p>																					
Step 5	<p>In the drop-down menu next to the Column Name, select the attribute value by which to filter and click the Search button. This example uses E – New Entity / New District as the attribute value. <i>Based on the column name choice and attribute value chosen, the search filters the attribute table to show the rows for the new tribal census tracts. Leaving the attribute value blank would return all records with a value in the CHNG_TYPE field.</i></p>  <table border="1" data-bbox="399 1262 1360 1360"> <thead> <tr> <th>NAME</th> <th>TRACTTYP</th> <th>AIANNHCE</th> <th>TBTRACTID</th> <th>PARTFLG</th> <th>CHNG_TYPE</th> <th>EDIT</th> </tr> </thead> <tbody> <tr> <td>T001.01</td> <td></td> <td>4610</td> <td>4610T00101</td> <td>N</td> <td>E - New Entity / New District</td> <td>1</td> </tr> <tr> <td>T001.02</td> <td></td> <td>4610</td> <td>4610T00102</td> <td>N</td> <td>E - New Entity / New District</td> <td>1</td> </tr> </tbody> </table>	NAME	TRACTTYP	AIANNHCE	TBTRACTID	PARTFLG	CHNG_TYPE	EDIT	T001.01		4610	4610T00101	N	E - New Entity / New District	1	T001.02		4610	4610T00102	N	E - New Entity / New District	1
NAME	TRACTTYP	AIANNHCE	TBTRACTID	PARTFLG	CHNG_TYPE	EDIT																
T001.01		4610	4610T00101	N	E - New Entity / New District	1																
T001.02		4610	4610T00102	N	E - New Entity / New District	1																

Step	Action and Result
Step 6	Selecting the record from the attribute table activates the Zoom menu and quickly zooms the map view to the selection.
Step 7	To return to the attribute table to see the full (<i>un-filtered</i>) layer, click the Refresh button in the upper right-hand corner of the dialog box.
Step 8	<p>Note: When filtering the table by some attributes (e.g., state and county FIPS code or MTFCC), no drop-down menu appears from which to select.</p> <p>Some attribute codes are too numerous to make scrolling through a list practical. Instead participants receive a blank box in which they may type the search value. For example, if filtering the area landmarks layer by MTFCC and want to see hospitals in the layer, type in the MTFCC for hospitals (K1231), and then click Search.</p> 

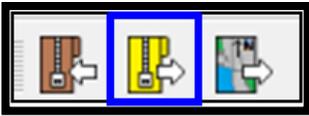
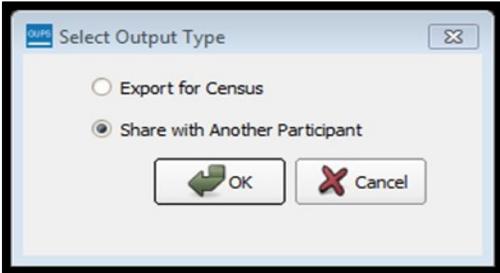
9.4 Export to Zip Button

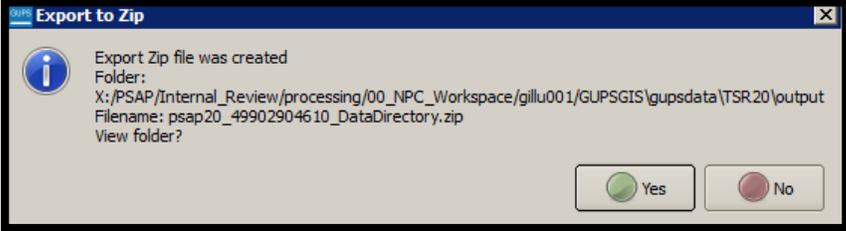
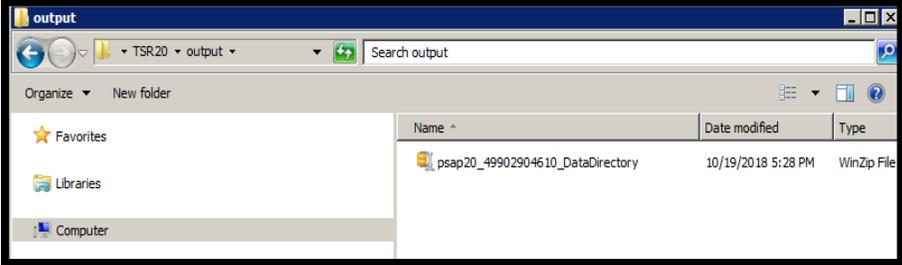
When creating export .zip files, participants have two options. They may export the file to share with another reviewer or they may export the file for submission to the Census Bureau. In either case, GUPS automatically names the output .zip file, packages all the files required by the Census Bureau (including any documentation uploaded into GUPS) into the .zip file, and saves it in a preset location created on the computer during the installation process. [Section 7.4.2.6](#) introduced this tool. This section repeats much of the information presented earlier, but serves as a closure to Chapter 8.

9.4.1 Export to Zip – Share with Another Participant

To export a file to share with another participant, follow the steps in [Table 54](#). A participant might find this functionality useful if they split the review work of geographies among staff; i.e., someone reviews the tribal census tracts and tribal block groups, while someone else reviews the CDPs or if a supervisor wishes to review work of their staff.

Table 54: Export a File to Share with Another Participant

Step	Action and Result
Step 1	Download and review the data as described in Section 6.2, Open GUPS and Start a New Project .
Step 2	<p>Click the Export to Zip button.</p>  <p>The Select Output Type dialog box opens.</p>  <p>Click the Share with Another Participant radio button. Then click OK.</p>

Step	Action and Result
Step 3	<p>The Export to Zip dialog box opens. GUPS generates a .zip file, stores it in the output directory that the GUPS installer placed on the computer during the installation process, and gives it a name that includes “DataDirectory.” Ignore the long path name for the file export. This is the current Census Bureau setup.</p> 
Step 4	<p>If participants click Yes, as shown in this example, GUPS automatically opens a windows explorer to the output folder location on the computer. If they click No, the Export to Zip dialog box closes.</p> 
Step 5	<p>Participants may now share the file with others who would then use the Import Project ZIP file button in the Map Management window or the Import County Zip button on the PSAP toolbar to open the shared .zip file as described in Section 7.4.2.5.</p>

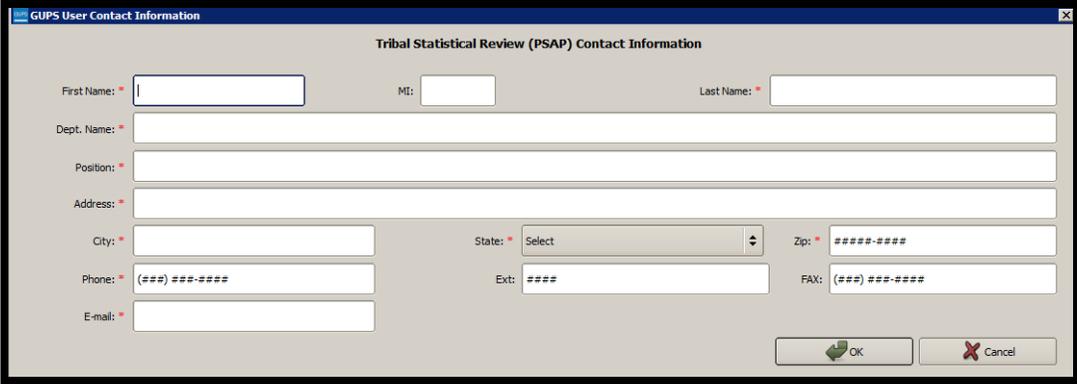
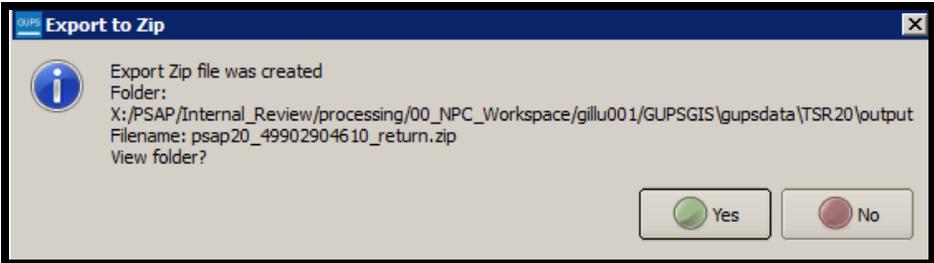
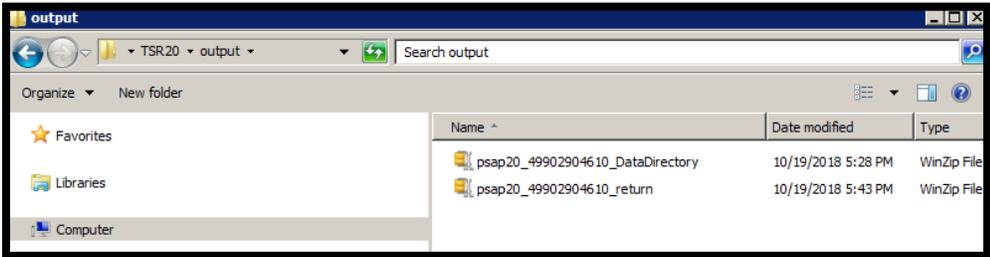
9.4.2 Export to Zip – Export for Census

To export a file to submit to the Census Bureau as the final submission for any tribal entity, follow the steps in [Table 55](#).

IMPORTANT: The Census Bureau accepts complete submissions for each tribal entity and will not accept partial submissions. This means a participant cannot submit a .zip file when they complete their review and update of tribal census tracts, then submit another .zip file to include their review and update of the tribal block groups. A tribal entity must be totally complete in order to be submitted for processing to the Census Bureau. If a participant splits work among reviewers, ensure all the work is complete prior to executing this button and submission of the .zip file to the Census Bureau. Additionally, participants may not mix updates on paper maps and in GUPS.

Table 55: Export a File for Submission to the Census Bureau

Step	Action and Result
Step 1	<p>Click the Export to Zip button.</p>  <p>The Select Output Type dialog box opens with two options, as shown in Table 54.</p>

Step	Action and Result
Step 2	Select the Export for Census radio button. Click OK .
Step 3	<p>A GUPS User Contact Information window opens with the Export for Census option. It requests contact information from the participant. All fields denoted with a red star are required for submission. Completion of this information helps the Census Bureau communicate with the participant should any questions or issues arise.</p> 
Step 4	<p>Following the completion of the GUPS User Contact Information, the Export to Zip dialog box opens. GUPS generates a .zip file, stores it in the output directory that the GUPS installer placed on the computer during the installation process, and gives it a name that includes “return.”</p>  <p>IMPORTANT: Make note of the location of the file listed in this dialog box because participants must navigate to the directory to submit this file using SWIM.</p>
Step 5	<p>As with the Share with Another Participant example, if participants click Yes, GUPS automatically opens a windows explorer to the output folder location on the computer. This feature is useful for participants ready to use SWIM to submit their file. If they click No, the Export to Zip dialog box closes.</p> 
Step 6	With the completion of this step, participants can proceed with uploading the file to the Census Bureau. Refer to the next chapter, Chapter 10 , for details on using SWIM.

CHAPTER 10. SECURE WEB INCOMING MODULE (SWIM)

If PSAP participants perform updates to their tribal statistical geographies that the geographies in GUPS, they must utilize the Census Bureau’s Secure Web Incoming Module, or SWIM, to submit their updated tribal entity .zip file for processing. Use the steps outlined in this chapter to learn how to use SWIM to make a submission.

10.1 SWIM Background and Requirements

The Census Bureau provided one SWIM registration token per PSAP participant with their delineation materials cover letter. We recommend either the primary contact or the technical contact utilize the token to create an account once they determine updates are necessary.

Some PSAP participants may have established a SWIM account for other Census geography programs. If so, there is no need to establish a new account just for PSAP. Participants without a SWIM account need to utilize the 12-digit registration token to establish an account. To determine whether an account exists, click “[Forgot your password?](#)” on the main SWIM page and enter the email address to check for account existence. If SWIM does not locate an account associated with the email address, it returns the following message, “*No account registered for this email. Go to Account Registration.*” Choosing the Account Registration link opens a window to establish a SWIM account.

Note: The components of the email and password of SWIM system accounts are case-sensitive. Make note of the case-sensitive format used when establishing the SWIM account (e.g., [jane@anytown.org](#) or [Jane@anytown.org](#) or [JANE@ANYTOWN.ORG](#)). The Census Bureau recommends the use of lowercase characters and recommends safe retention of this information in a secure location for future reference.

In addition, SWIM allows four attempts to login before it temporarily locks the account for 15 minutes. After the 15-minute lock expires, participants may try to login again or reset their password using the “Forgot your password?” link on the login page. Once selected, follow the prompts to enter the case-sensitive email address and provide the security answer. If the security answer is correct, the SWIM system sends a password reset link to the email account for use in resetting the password. In addition, once logged into SWIM, users can modify their password and security answer by selecting the ‘Change Security’ link at the top, right-hand side of the page. Participants continuing to experience issues logging into SWIM can contact 1-844-788-4921 for another SWIM token.

IMPORTANT: Do not use email to send the 2020 PSAP submission to the Census Bureau.

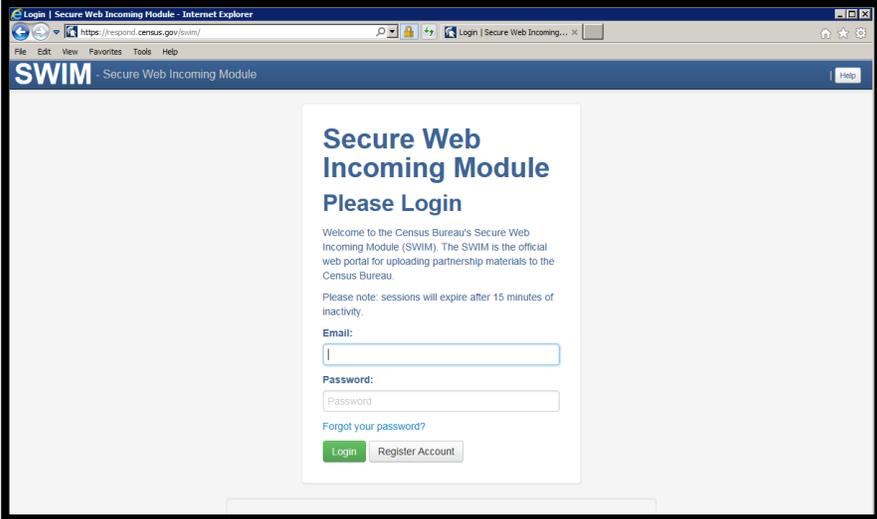
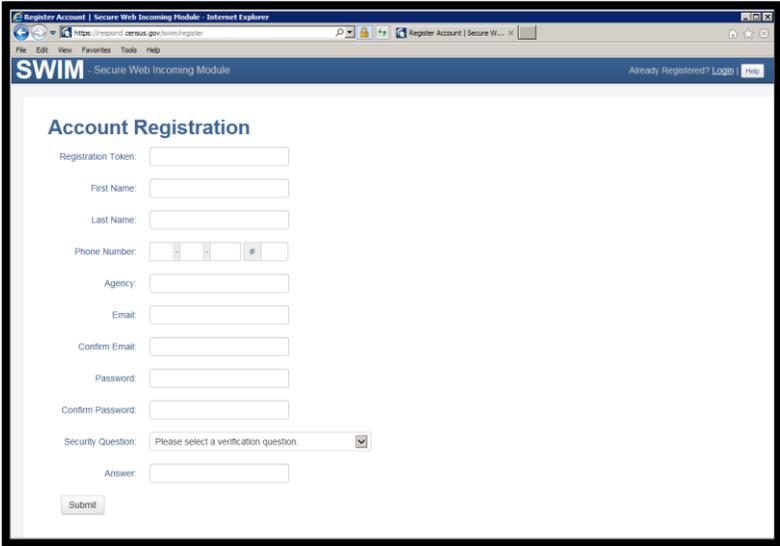
The following list contains the file requirements for using SWIM:

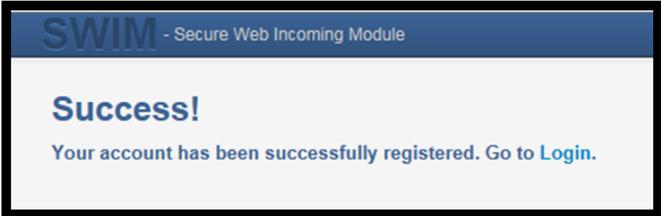
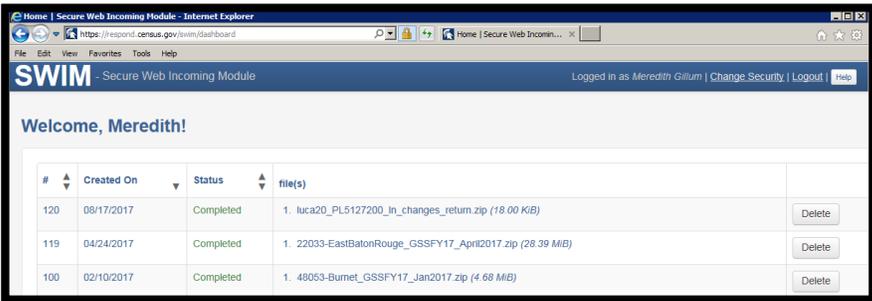
- File to upload must be .zip file format.
- The .zip file may not include another .zip file as a component.
- The .zip file must not be larger than 250 megabytes in size.

10.2 SWIM Submission Example

Refer to [Table 56](#) for instructions on utilizing the SWIM application to submit PSAP updates.

Table 56: SWIM Submission

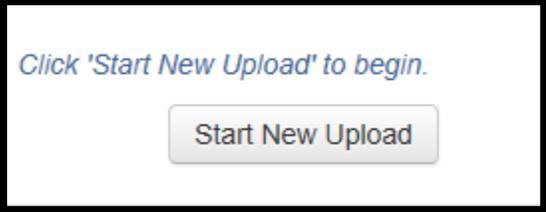
Step	Action and Result
<p>Step 1</p>	<p>Open a new browser window and enter the SWIM URL <https://respond.census.gov/swim>. The SWIM Please Login screen opens.</p> 
<p>Step 2</p>	<p>For participants with an existing SWIM account, enter the email address and password and then click the Login button. The Welcome screen opens. Go to Step 8.</p>
<p>Step 3</p>	<p>For participants without a SWIM account, have the 12-digit registration token provided by the Census Bureau ready for account registration. Choose the Register Account button after accessing the SWIM URL. The Account Registration screen opens.</p> 

Step	Action and Result
	All fields on the Account Registration screen are required.
Step 4	Enter the registration token, name, phone number, agency or organization, email address in the appropriate fields.
Step 5	<p>Create a password using the following criteria:</p> <ol style="list-style-type: none"> 1. Must be at least 8-characters in length. 2. Must have at least one uppercase character. 3. Must have at least one lowercase character. 4. Must have at least one number. 5. Must have at least one special character. Valid choices are as follows: #, !, \$, *, &, ?, and ~. <p>Note: The comma shown in the previous list are for spacing purposes only. The comma is not a valid special character for use in the password.</p>
Step 6	<p>Establish a security question. Click arrow to the right of the Security Question field and select a question from the drop-down menu. Enter an answer in the Answer field. Click the Submit button when finished. A Success screen opens to confirm the successful creation of a SWIM account.</p> 
Step 7	On the Success screen, select Login to return to the SWIM Please Login screen (shown in Step 1) to proceed with the login process.
Step 8	<p>Enter the email and password information and click the green Login button to log into SWIM. The Welcome screen opens. If the account has uploaded other PSAP working counties or other files for different geography programs administered by the Census Bureau, a list of files previously uploaded by the SWIM user displays, as shown in the example below. The list includes the creation date of the file upload, the name of the file, and the corresponding size of the .zip file.</p> 

Step	Action and Result
------	-------------------

Step 9

To begin a new upload, click the **Start New Upload** button at the bottom of the screen.

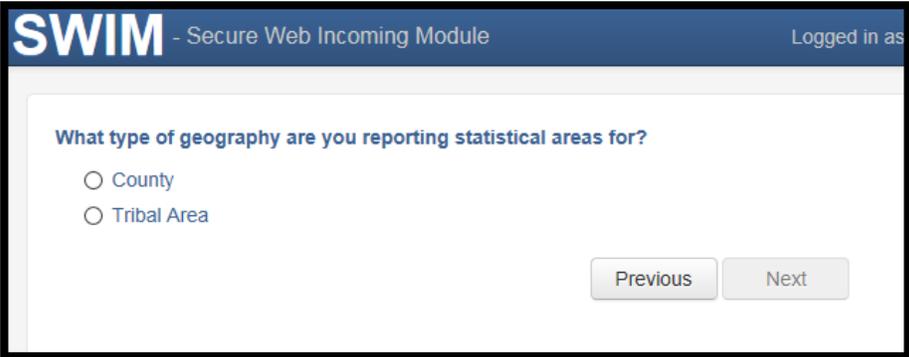
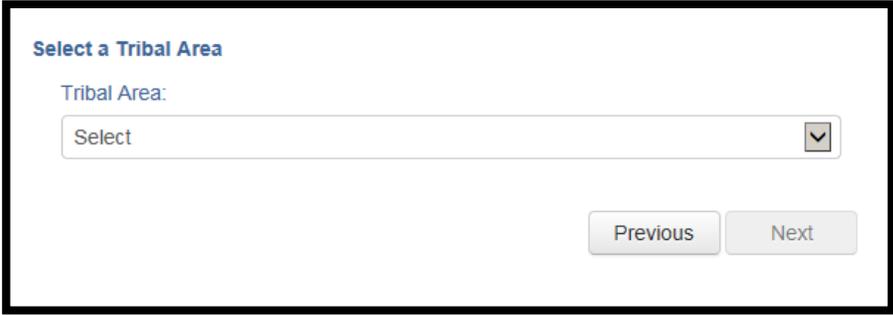


The **“What Census program are you reporting data for?”** screen opens. Choose the **Participant Statistical Areas Program (PSAP)** radio button and click the **Next** button.

What Census program are you reporting data for?

Select the geographic program that you currently wish to submit data for the Census Bureau to review. This selection affects only your current upload. You may select a different option for future uploads. If you are unsure what program to select send an email to geo.swim@census.gov for more guidance.

- Boundary Annexation Survey (BAS)
- Boundary Quality Assessment and Reconciliation Project (BQARP)
- Federal Agency Updates (FDU)
- Geographic Support System (GSS)
- Local Update of Census Addresses Feedback(LUCA FB)
- Participant Statistical Areas Program (PSAP)
- Redistricting Data Program - BBSP-VTD (RDP)
- Redistricting Data Program - CD-SLD (RDP)
- School District Review Program (SDRP)
- Count Review Operation (CRO)
- New Construction (NC)

Step	Action and Result
<p>Step 10</p>	<p>The “What type of statistical area are you reporting for?” screen opens.</p>  <p>Click the radio button for the entity type to upload and click the Next button. Tribal statistical geography participants choose Tribal Area. <i>The choice of Tribal Area opens the Select a Tribal Area screen.</i></p> 

Step	Action and Result
<p>Step 11</p>	<p>Following the selection of the statistical area to upload, <i>the Select a .ZIP file to upload screen opens</i>. Click the +Add File button to <i>launch the Choose File to Upload window</i> and navigate to the directory where the .zip file resides. Refer to Table 55 to identify the location of the .zip file to upload. The .zip file resides in the “GUPSGIS\gupsdata\tsr20\output” folder on the default drive selected during installation. This is likely the “C:” drive.</p> <div data-bbox="376 401 1370 863" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Select a .ZIP file to upload.</p> <p>File submissions must be in "zip format" and file size should not exceed 250 MB. Please group all related data together into one ZIP archive including any metadata or supporting documentation that you have available. Please include information about how your geographic data is projected if applicable. If you are submitting shapefiles, be sure to include all of the component files necessary to use the shapefile (at a minimum .shp, .prj, .dbf, .shx). If you are submitting a .MXD file please be sure to include all of the separate data files that are used in the Map (all of the layers, shapefiles, etc.). Please provide any additional information, as applicable, in the comments box below.</p> <p>Choose File: <input type="button" value="+ Add File"/></p> <p>Status:</p> <p>File(s):</p> <p>Comments:</p> <div style="border: 1px solid gray; height: 30px; width: 100%;"></div> <p style="text-align: center;"> <input type="button" value="Previous"/> <input type="button" value="Next"/> </p> </div> <div data-bbox="371 942 1373 1625" style="border: 1px solid black; padding: 5px;"> </div>

Step	Action and Result
<p>Step 12</p>	<p>Once the file upload completes, the Status field shows “Success.” The name of the file appears in the File(s) field. Participants can add comments to the Comment section if they choose. Click the Next button to proceed with the upload.</p> <div data-bbox="370 352 1386 835" style="border: 2px solid black; padding: 10px;"> <p>Select a .ZIP file to upload.</p> <p>File submissions must be in "zip format" and file size should not exceed 250 MB. Please group all related data together into one ZIP archive including a documentation that you have available. Please include information about how your geographic data is projected if applicable. If you are submitting shapefile component files necessary to use the shapefile (at a minimum .shp, .prj, .dbf, .shx). If you are submitting a .MXD file please be sure to include all of the the Map (all of the layers, shapefiles, etc.). Please provide any additional information, as applicable, in the comments box below.</p> <p>Choose File: <input type="button" value="+ Add File"/></p> <p>Status: Success</p> <p>File(s):</p> <ul style="list-style-type: none"> • psap20_49902904610_return.zip <p>Comments:</p> <div style="border: 1px solid #ccc; padding: 5px; min-height: 20px;"> 2020 Census PSAP submission of tribal census tracts and tribal block groups for Wind River Reservation. </div> <p style="text-align: right;"> <input type="button" value="Previous"/> <input type="button" value="Next"/> </p> </div>
<p>Step 13</p>	<p>The Thank You screen appears. It thanks the participant and indicates a forthcoming email once transfer completes.</p> <div data-bbox="370 1003 1399 1213" style="border: 2px solid black; padding: 10px;"> <h2 style="text-align: center; color: #0056b3;">Thank You</h2> <p style="text-align: center; color: #008000;">Thank you for using SWIM. You will receive an email when your file successfully transfers to the Census Bureau.</p> <p>File: psap20_49902904610_return.zip</p> <p>You may Log Out or return to the upload form, to submit more files.</p> </div>
<p>Step 14</p>	<p>If complete with the upload process, choose Log Out.</p>

Step	Action and Result
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It is important to mention that SWIM sessions deactivate after 15 minutes of inactivity. Participants taking longer than 15 minutes to upload a file must log back into the system and start again. They receive a message noting the period of inactivity on the Login screen.

Secure Web Incoming Module Please Login

Welcome to the Census Bureau's Secure Web Incoming Module (SWIM). The SWIM is the official web portal for uploading partnership materials to the Census Bureau.

Please note: sessions will expire after 15 minutes of inactivity.

You have been logged out due to inactivity.

Email:

Password:

[Forgot your password?](#)

Login
Register Account

When they reach the **Welcome** screen, a record listed with a **Status** of “**In progress, Continue?**” appears with that day’s date in the **Created On** field. Participants can choose the “**Continue?**” link to continue uploading or they can delete the item by choosing the **Delete** button to the far right of the row.

Welcome, Meredith!

#	Created On	Status	file(s)
1	10/11/2018	In Progress. Continue?	<input type="button" value="Delete"/>

PART 4 NEXT STEPS FOR 2020 CENSUS PSAP

Congratulations on the completion of the delineation phase of 2020 Census PSAP. While this is a major step, it does not conclude participation in 2020 Census PSAP. The final part to this document describes the next steps for 2020 Census PSAP. These steps include a high-level description of the processing of participants' submissions conducted by the Census Bureau that must occur prior to the verification phase. The document concludes by highlighting the plans for the verification and closeout phases of 2020 Census PSAP.

Once received through the SWIM process, the Census Bureau begins its review. This process includes running the same validation checks in GUPS described in [Part 3](#) and conducting basic quality assessments to ensure the specific criteria for each tribal statistical geography is enforced.

After completing the review of the updated delineation materials, the Census Bureau uses the newly suggested geographies to generate the final version of the proposed plan, reviewed by participants in the verification phase. The verification phase begins January 2020 with participants having 90 days to review the verification materials for accuracy of the updates they provided during the delineation phase and respond with suggested corrections. Participants receive a prepaid, verification phase postcard asking them to verify, accept, or reject the final version of the proposed plan. The Census Bureau plans to conduct follow-up with non-responding participants in order to ensure receipt of a response from each that participated during the delineation phase. Once the Census Bureau receives the verification phase postcard with the approval or acceptance of the verification plan or after they receive the suggested corrections, they can finalize the 2020 Census statistical boundaries.

In October 2020, the Census Bureau begins the closeout phase of the 2020 Census PSAP to ensure there are no outstanding changes submitted by participants or to communicate the reasoning for not making participant suggested changes. The timing of this phase begins after allowing time for processing any updates from the verification phase.

More details on both the verification and closeout phases will appear on the PSAP website as they become available. In addition, further communication occurs in advance of each of the last two phases. This concludes the instructional content for the delineation phase for 2020 Census PSAP.

APPENDICES

APPENDIX A GLOSSARY

Alaska Native Claims Settlement Act (ANCSA) – Federal legislation (Pub. L. 92-203, 85 Stat. 688 (1971); 43 U.S.C. 1602 *et seq.* (2000)) enacted in 1971 that recognized Native villages and Native groups, and established ANRCs and their regional boundaries

Alaska Native Regional Corporation (ANRC) – A corporate geographic area established under the Alaska Native Claims Settlement Act (Pub. L. 92–203, 85 Stat. 688 (1971)) to conduct both the business and nonprofit affairs of Alaska Natives. Twelve ANRCs cover the entire State of Alaska except for the Annette Island Reserve.

Alaska Native – For purposes of PSAP, Alaska Native refers to anyone who self-identifies as an American Indian and/or an Alaska Native (AIAN) alone or in combination with one or more other races and resides in Alaska.

Alaska Native village (ANV) – A local governmental unit in Alaska that constitutes an association, band, clan, community, group, tribe, or village recognized by and eligible to receive services from the BIA and/or in accordance with the ANCSA as a Native village or Native group.

Alaska Native Village Corporation (ANVC) – A corporation created pursuant to the ANCSA and organized under the laws of the state of Alaska as a for-profit or non-profit business to hold, invest, manage, and/or distribute lands, property, funds, and assets for or on behalf of a Native village.

Alaska Native village statistical area (ANVSA) – A statistical geographic entity that represents the residences, permanent and/or seasonal, for Alaska Natives who are members of or receiving government services from the defining ANV that are located within the region and vicinity of the ANV’s historic and/or traditional location. ANVSAs are intended to represent the relatively densely settled portion of each ANV and should include only an area where Alaska Natives, especially members of the defining ANV, represent a significant proportion of the population during at least one season of the year (at least three consecutive months).

American Community Survey (ACS) – A survey conducted by the Census Bureau that uses a series of monthly samples to produce annually updated data for the same small areas (census tract and block groups) as the decennial census long-form sample previously surveyed. The Census Bureau last utilized the long-form during Census 2000.

American Indian Area (AIA) – A Census Bureau term that refers to any or all of the following entities: American Indian reservation, American Indian off-reservation trust land, Oklahoma tribal statistical area, joint use area, American Indian tribal subdivision, tribal designated statistical area, and state designated American Indian statistical area.

American Indian off-reservation trust land (ORTL) – An area of land located outside the boundaries of an AIR, whose boundaries are established by deed, and which are held in trust by the U.S. federal government for a federally recognized American Indian tribe or members of that tribe.

American Indian reservation (AIR) – An area of land with boundaries established by final treaty, statute, executive order, and/or court order and over which a federally recognized,

American Indian tribal government has governmental authority. Along with “reservation” primary governmental or administrative division of a county in 28 states and the “reservation” designations such as colonies, communities, pueblos, rancherias, and reserves apply to AIRs.

American Indian tribal subdivision – A legal subdivision of a federally recognized American Indian reservation, off-reservation trust land, or a statistical subdivision of Oklahoma tribal statistical areas. These entities are internal units of self-government or administration that serve social, cultural, and/or economic purposes for American Indians.

Borough – A legal geographic entity within the state of Alaska. For purposes of PSAP, the Census Bureau treats boroughs equivalent to county in other states for data collection, tabulation, and presentation purposes.

Boundary – A line, either invisible or coincident with a visible feature that identifies the extent of a geographic entity, such as a census tract, city, county, state, or reservation. A boundary marks the limits of an area.

Boundary and Annexation Survey (BAS) – An annual survey to collect information about selected legally defined geographic areas. The Census Bureau uses BAS as a means to update information about the legal boundaries and names of all governmental units in the United States.

Bureau of Indian Affairs (BIA) – The primary agency of the federal government, located within the U.S. Department of the Interior (DOI), charged with the trust and responsibility between the federal government and federally recognized AIAN tribal governments and communities, including BIA-recognized ANVs.

Bureau of Land Management (BLM) – The primary agency of the federal government, located within the DOI, charged with carrying out the ANCSA.

Census block – A census block is an area bounded by visible and/or invisible features shown on Census Bureau maps. A census block is the smallest geographic area created by the Census Bureau for which it collects and tabulates decennial census data. Census blocks are numbered within block groups and are uniquely numbered within census tracts.

Census block group – Block groups are statistical geographic divisions of a census tract, defined for the tabulation and dissemination of census data from the decennial censuses, the ACS, and other select surveys.

Census block number – Census block numbers contain a 4-digit number. Census blocks are numbered uniquely within each census tract.

Census Bureau – An agency within the U.S. Department of Commerce. The Census Bureau is the country's preeminent statistical collection and dissemination agency. It publishes a wide variety of statistical data about people and the economy of the nation. The Census Bureau conducts approximately 200 annual surveys and conducts the decennial census of the United States population.

Census Bureau map – Any map produced by the Census Bureau. A Census Bureau map displays geographic entities used in a Census Bureau sponsored census or survey for which the Census Bureau tabulates data.

Census county division (CCD) – Statistical geographic entities in 21 states where minor civil divisions either do not exist or have been unsatisfactory for reporting statistical data. The Census Bureau, in cooperation with state, tribal, and local officials, delineate these areas solely for statistical purposes. CCDs have no legal function and are not legal governmental units. The primary goal of CCDs is to establish and maintain a set of sub-county geographies with stable boundaries and recognizable names. Naming of each CCD is based on a place, county, or well-known local name that identifies its location. In most cases, census tracts nest within CCDs, but in less populated counties CCDs nest within census tracts.

Census designated place (CDP) – Statistical geographic entities representing closely settled, unincorporated communities that are locally recognized and identified by name. CDPs are the statistical equivalent of incorporated places, with the primary differences being the lack of both a legally defined boundary and an active, functioning governmental structure chartered by the state and administered by elected official.

Census tract – A small, relatively permanent statistical subdivision of a county or statistically equivalent entity delineated for data presentation. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time of establishment, census tracts generally contain between 1,000 and 8,000 people, with an optimum size of 4,000 people. Delineated with the intention of being stable over many decades, census tract boundaries generally follow relatively permanent visible features. However, they may follow governmental unit boundaries and other invisible features in some instances; the boundary of a state or county (or statistically equivalent entity) is always a census tract boundary.

Census tract number – Unique numbers to identify census tracts within a county or statistically equivalent entity. Census tract numbers contain up to a 4-digit number followed by a decimal point and a 2-digit number for suffixed tracts, e.g., 1234.01. For census tracts without a suffix, the number will contain a period with zero fill, e.g., 4567.00. Leading zeros for census tracts, e.g., 0001.00, are not shown on Census Bureau maps. This tract would appear as “1” on maps.

City-style address – The Census Bureau’s definition of a city style address is an address consisting of a house number and street or road name. For example, 201 Main Street is a city style address. The address may or may not be used for the delivery of mail and may include apartment numbers/designations or similar identifiers.

Coextensive – The Census Bureau defines coextensive as two or more geographic entities that cover exactly the same area, with all boundaries shared.

Conjoint – The Census Bureau defines conjoint as a boundary line shared by two adjacent geographic entities.

Contiguous – The Census Bureau defines contiguous as areas sharing common boundary lines, more than a single point, such that the areas, when combined, form a single piece of territory. Non-contiguous areas form disjoint pieces.

County – The primary legal division of most states. Most are governmental units with powers defined by state law.

Edges – All linear features contained in the MAF/TIGER database.

Edges shapefile – All linear features in the MAF/TIGER database are contained in the edges shapefile. Participants use the edges shapefile to add, delete, or change linear feature attributes.

Faces – Topological areas in the MAF/TIGER database formed by edges.

Feature – Any part of the landscape, whether natural (a stream or ridge) or artificial (a road or power line). In a geographic context, features are any part of the landscape portrayed on a map, including nonvisible boundaries of legal entities, such as, city limits or county lines.

Federal Information Processing Series (FIPS)—These are codes formerly known as Federal Information Processing Standards codes, until the National Institute of Standards and Technology (NIST) announced its decision in 2005 to remove geographic entity codes from its oversight. The Census Bureau continues to maintain and issue codes for geographic entities covered under FIPS oversight, albeit with a revised meaning for the FIPS acronym. Geographic entities covered under FIPS include states, counties, congressional districts, core based statistical areas, places, county subdivisions, sub-minor civil divisions, consolidated cities, and all types of American Indian, Alaska Native, and Native Hawaiian areas. FIPS codes are assigned alphabetically according to the name of the geographic entity and may change to maintain alphabetic sort when new entities are created or names change. FIPS codes for specific geographic entity types are usually unique within the next highest level of geographic entity with which a nesting relationship exists. For example, FIPS state, congressional district, and core based statistical area codes are unique within nation; FIPS county, place, county subdivision, and sub-minor civil division codes are unique within state. The codes for American Indian, Alaska Native, and Native Hawaiian areas also are unique within state; those areas in multiple states will have different codes for each state.

Geocodes – Codes that place an individual address in its correct geographic location, which includes the correct state, county, census tract, and census block codes. Because the Census Bureau counts people where they live, geocodes provide information to Census enumerators for locating an address. Accurate geocoding also ensures the Census Bureau counts housing units, and the people associated with them, in the correct census geography.

Geographic Information System (GIS) – A computer system for the storage, retrieval, and maintenance of information about the points, lines, and areas that represent the streets and roads, rivers, railroads, geographic entities, and other features on the surface of the Earth—information that previously was available only on paper maps.

Geographic Update Partnership Software (GUPS) – A self-contained GIS update and processing package provided by the Census Bureau for participation in a variety of Census geography programs, including 2020 Census PSAP. Pre-packaged to include all of the components for 2020 PSAP, the GUPS contains the Census Bureau’s TIGER partnership shapefiles necessary to participate. GUPS allows the participant to add external geospatial data (shapefiles, geodatabases, and imagery) for comparison and update purposes.

Group quarters – The Census Bureau defines group quarters as a location where people live or stay in a group living arrangement that is owned or managed by an entity or organization providing housing and/or services for the residents. This is not a typical household-type living arrangement. These services may include custodial or medical care as well as other types of assistance, and residency is commonly restricted to those receiving these services. People living in group quarters are usually not related to each other. Group quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, and workers’ dormitories.

Housing unit – The Census Bureau defines a housing unit as a house, an apartment, a mobile home or trailer, or a group of rooms or a single room occupied as a separate living quarter or, if vacant, intended for occupancy as a separate living quarter. Separate living quarters are those in which the occupants live and eat separately from any other residents of the building and which have direct access from outside the building or through a common hall.

Incorporated place – A type of governmental unit, incorporated under state law as a city, town (except in New England, New York, and Wisconsin), borough (except in Alaska and New York), or village, generally to provide governmental services for a concentration of people within legally prescribed boundaries.

Legal boundary – The legally defined boundary of a governmental unit, usually referring to a county, minor civil division, or incorporated place. The legal boundary identifies the area within a tribal government’s jurisdiction, and thus bounds the area of PSAP responsibility.

Master Address File (MAF) – The Census Bureau’s nationwide database of all addresses and physical/location descriptions known to the Census Bureau used to support many of the Census Bureau’s operations. Besides containing mailing addresses and ZIP Codes, a MAF record also contains geographic information about the location of addresses. The Census Bureau’s Geography Division regularly updates the MAF/TIGER Database from various sources, including the United States Postal Service (USPS) Delivery Sequence File (DSF) and other sources of updates such as current surveys and locally provided sources.

MAF/TIGER database (MTDB) – The Census Bureau’s nationwide geographic database, which integrates the Master Address File (MAF) and Topologically Integrated Geographic Encoding and Referencing (TIGER) files.

MAF/TIGER Feature Classification Code (MTFCC) – A 5-digit code assigned by the Census Bureau to classify and describe geographic objects or features in the MAF/TIGER database and its output products.

Metadata – describes the data content, coordinate system/projection, author, source, and other characteristics of GIS files.

Minor civil division (MCD) – The primary governmental or administrative division of a county in 29 states and the Island Areas having legal boundaries, names, and descriptions. The MCDs represent many different types of legal entities with a wide variety of characteristics, powers, and functions depending on the state and type of MCD. In some states, some or all of the incorporated places also constitute MCDs. MCDs are identified by a variety of terms, such as town (in eight states), township, and/or district. They include both functioning and nonfunctioning government entities.

Municipio —A type of governmental unit that is the primary legal subdivision of Puerto Rico. The Census Bureau treats the municipio as the statistical equivalent of a county.

Non-city style address – The Census Bureau’s definition of a non-city style address is one that does not have a house number and/or street name or may not include a complete house number and street name address. This includes rural route and box number address and highway contract route addresses, etc., which may include a box number, post office boxes and drawers, and general delivery.

Nonvisible feature – The Census Bureau defines a nonvisible feature as one that is not visible on the ground and/or in imagery such as a city or county boundary through space, a property line, or line-of-sight extension of a road.

Off-Reservation Trust Land (ORTL) – A type of legal geographic entity that is a recognized American Indian land area for which the United States federal government holds fee title in trust for the benefit of a tribe (tribal trust land) or for an individual American Indian (individual trust land). Trust lands can be alienated or encumbered only by the owner with the approval of the Secretary of the Interior or his/her authorized representative. Trust lands may be located on or off an AIR. The Census Bureau recognizes and tabulates data for AIRS and ORTLs because the tribe has governmental authority over these lands. Primary tribal governmental authority generally is not attached to tribal lands located off the AIR until the lands are placed in trust. In Census Bureau data tabulations, ORTLs are always associated with a specific federal AIR and/or tribal government.

Participant Statistical Areas Program (PSAP) – A Census Bureau program offered every 10 years that allows identified participants, following established criteria and guidelines, to review and update existing statistical geographies and delineate new statistical geographies as appropriate. The standard statistical geographies include census tracts, block groups, census designated places, and census county divisions.

Place – A concentration of population either legally bound as an incorporated place or identified by the Census Bureau as a census designated place.

PSAP official liaison – A person at the PSAP participating government or organization identified to serve as the primary point of contact for PSAP.

PSAP technical contact – A person serving as the technical point of contact for a PSAP participant that likely conducts the actual program work using the Census Bureau’s Geographic Update Partnership Software (GUPS) or paper maps (for tribal participants).

Regional Census Center (RCC) – Temporary offices set up approximately two years prior to the decennial census. The geographic staff from the Regional Offices are assigned to their respective RCC and assist with the execution of various geographic operations as well as provide support for the field operations conducted during the decennial.

Regional Office (RO) – One of the permanent Census Bureau offices responsible for the Census Bureau’s office and field operations within its region.

Retracting – The Census Bureau defines retracting as substantially changing the boundaries of a census tract so that comparability over decades is lost.

Shapefile – Digital representations of geographic features, such as roads and boundaries used to create maps. A shapefile stores non-topological geometry and attribute information for the spatial features in a dataset. The Census Bureau provides county-based shapefiles in Esri shapefile format.

Special use census tract/block group – A type of census tract or block group designated as a specific use type (e.g., state park or large lake) and has an official name (e.g. Cleburne State Park or Lake Minnetonka). Special use geographies should contain no (or very little) population or housing, and must not create a noncontiguous census tract/block group.

Standard statistical geographic entity (standard statistical geographies) – A geographic entity specifically defined and delineated (census tract, block group, census designated place, census county division) so that the Census Bureau may tabulate data for it. Designation as a statistical entity neither conveys nor confers legal ownership, entitlement, or jurisdictional authority.

Street segment – The portion of a street or road between two features that intersect that street or road, such as, other streets or roads, railroad tracks, streams, and governmental unit boundaries. The Census Bureau records the known address ranges for every street segment with city-style addresses.

Topologically Integrated Geographic Encoding and Referencing (TIGER)—The Census Bureau’s digital map, including the geographic coordinates and names of streets, water features, other linear features, and boundaries for all jurisdictions and statistical areas that provide the geospatial framework for collecting and tabulating census data. TIGER also contains the structure coordinates of address records in the Master Address File (MAF) and address ranges along street features used for geocoding MAF records to census geography.

Visible feature – The Census Bureau defines a visible feature as one that can be seen on the ground and/or in imagery. Visible features include a street, railroad tract, major above ground transmission line or pipeline, stream, shoreline, fence, distinctly defined mountain ridge, or cliff. A non-standard visible feature is a visible feature that may not be clearly defined on the ground (such as a ridgeline), may be seasonal (such as an intermittent stream), or may be relatively impermanent (such as a fence). The Census Bureau generally requests verification that nonstandard visible features used for statistical geographies pose no problem during fieldwork necessary to conduct a census or survey.

APPENDIX B 2020 CENSUS PSAP CRITERIA

In **Part 1** of the Respondent Guide, individual tables reflect each of the geographies separately. This table shows the three statistical geographies eligible for update by federally recognized tribal entities along with their associated population and housing criteria.

Table 57: Tribal Statistical Geographies and their Population and Housing Criteria

Tribal statistical geography	Nests Within	Population Criteria		Housing Unit Criteria	
Tribal census tracts	AIR and/or ORTL	Optimum	4,000	Optimum	1,600
		Minimum	1,200	Minimum	480
		Maximum	8,000	Maximum	3,200
Tribal block groups	Tribal census tract	Optimum	1,500	Optimum	None
		Minimum	600	Minimum	240
		Maximum	3,000	Maximum	1,200
Census designated places (CDPs)	State	A CDP cannot have zero population and zero housing units.		A CDP cannot have zero population and zero housing units.	

APPENDIX C PSAP HISTORICAL BACKGROUND

C.1 HISTORY OF CENSUS TRACTS

In 1905, Dr. Walter Laidlaw originated the concept of permanent, small geographic areas as a framework for studying change from one decennial census to another in neighborhoods within New York City. For the 1910 Census, eight cities—New York, Baltimore, Boston, Chicago, Cleveland, Philadelphia, Pittsburgh, and St. Louis—delineated census tracts (then termed “districts”) for the first time. No additional jurisdictions delineated census tracts until just prior to the 1930 Census, when an additional ten cities chose to do so. The increased interest in census tracts for the 1930 Census is attributed to the promotional efforts of Howard Whipple Green, who was a statistician in Cleveland, Ohio, and later the chairman of the American Statistical Association's Committee on Census Enumeration Areas. For more than twenty-five years, Mr. Green strongly encouraged local citizens, via committees, to establish census tracts and other census statistical geographic areas. The committees created by local citizens were known as Census Tract Committees, later called Census Statistical Areas Committees.

After 1930, the Census Bureau saw the need to standardize the delineation, review, and updating of census tracts and published the first set of census tract criteria in 1934. The goal of the criteria has remained unchanged; that is, to assure comparability and data reliability through the standardization of the population thresholds for census tracts, as well as requiring that their boundaries follow specific types of geographic features that do not change frequently. The Census Bureau began publishing census tract data as part of its standard tabulations beginning with the 1940 Census. Prior to that time, census tract data were published as special tabulations.

For the 1940 Census, the Census Bureau began publishing census block data for all cities with 50,000 or more people. Census block numbers were assigned, where possible, by census tract, but for those cities that had not yet delineated census tracts, “block areas” (called “block numbering areas” [BNAs] in later censuses) were created to assign census block numbers.

Starting with the 1960 Census, the Census Bureau assumed a greater role in promoting and coordinating the delineation, review, and update of census tracts. For the 1980 Census, criteria for BNAs were changed to make them more comparable in size and shape to census tracts. For the 1990 Census, all counties contained either census tracts or BNAs.

Census 2000 was the first decade in which census tracts were defined in all counties. In addition, the Census Bureau increased the number of geographic areas whose boundaries could be used as census tract boundaries. It also allowed tribal governments of federally recognized American Indian tribes with a reservation and/or off-reservation trust lands to delineate tracts without regard to state and/or county boundaries, provided the tribe had a 1990 Census population of at least 1,000.

For the 2010 Census, the Census Bureau adopted changes to census tract criteria that recognized their utility as a framework of small geographic areas for presenting and analyzing statistical and other data for a variety of communities, settlement patterns, and landscapes. The Census Bureau augmented its minimum, maximum, and optimum population threshold with housing unit thresholds for use in defining census tracts for seasonal communities that

have no or low population on census day (April 1). In addition, the Census Bureau formalized criteria for census tracts defined for employment centers, airports, parks, large water bodies, and other special land uses that had been permitted in previous decades, but never specified within the criteria. The Census Bureau also established tribal census tracts as a geographic framework defined within federally recognized American Indian reservations and off-reservation trust lands that is fully separate from the standard census tracts defined within counties.

C.2 HISTORY OF BLOCK GROUPS

The Census Bureau first delineated block groups as statistical geographic divisions of census tracts for the 1970 Census, comprising contiguous combinations of census blocks for data presentation purposes. At that time, census block groups only existed in urbanized areas in with census blocks. Defined without regard to political and administrative boundaries, block groups contained an average population of 1,000, and were approximately equal in area.

As use of census block, block group, and census tract data increased among data users, the Census Bureau expanded these programs to cover additional geographic areas while redefining the population threshold criteria to more adequately suit data users' needs. The 1990 Census was the first decennial census in which census blocks and block groups were defined throughout the entirety of the United States, Puerto Rico, and the Island Areas. For the 2000 Census, the Census Bureau increased the number of geographic areas whose boundaries could be used as block group boundaries. The Census Bureau allowed tribal governments of federally recognized American Indian tribes with a reservation and/or off-reservation trust lands to delineate tribal block groups without regard to state and/or county boundaries, provided the tribe had a 1990 Census population of at least 1,000.

For the 2010 Census, the Census Bureau adopted changes to block group criteria that recognized their utility as a framework of small geographic areas for presenting and analyzing statistical and other data for a variety of communities, settlement patterns, and landscapes. The Census Bureau augmented its minimum and maximum population threshold with housing unit thresholds for use in defining block groups for seasonal communities that have no or low population on census day (April 1). In addition, the Census Bureau formalized criteria for block groups defined for employment centers, airports, parks, large water bodies, and other special land uses permitted in previous decades, but never specified within the criteria. The Census Bureau also established tribal block groups as a geographic framework defined within federally recognized American Indian reservations and off-reservation trust lands that is fully separate from the standard block groups defined within counties.

C.3 HISTORY OF CENSUS DESIGNATED PLACES (CDPS)

In response to data user needs for place-level data, the CDP concept and delineation criteria have evolved over the past seven decades. This evolution has taken into account differences in the way in which places were perceived, and the propensity for places to incorporate in various states. Over time, the result has been an increase in the number and types of unincorporated communities identified as CDPs, as well as an increasing consistency in the relationship between the CDP concept and the kinds of places encompassed by the incorporated place

category, or a compromise between localized perceptions of place and a concept that would be familiar to data users throughout the United States, Puerto Rico, and the Island Areas.

Although not as numerous as incorporated places, CDPs have been important geographic entities since their introduction for the 1950 Census (CDPs were referred to as “unincorporated places” from 1950 through the 1970 decennial censuses). For the 1950 Census, CDPs were defined only outside urbanized areas and were required to have at least 1,000 residents. For the 1960 Census, CDPs could also be identified inside urbanized areas outside of New England, but these were required to have at least 10,000 residents. The Census Bureau modified the population threshold within urbanized areas to 5,000 residents in 1970, allowed for CDPs in urbanized areas in New England in 1980, and lowered the threshold for CDPs within urbanized areas to 2,500 in 1990. In time, other population thresholds were adopted for identification of CDPs in Alaska, Puerto Rico, the Island Areas, and on American Indian reservations (AIRs). The Census Bureau eliminated all population threshold requirements for Census 2000, achieving consistency between CDPs and incorporated places, for which the Census Bureau historically has published data without regard to population size.

According to the 2010 Census, more than 38.7 million people in the United States, Puerto Rico, and the Island Areas lived in CDPs. The relative importance of CDPs varies from state to state depending on laws governing municipal incorporation and annexation, but also depending on local preferences and attitudes regarding the identification of places.

C.4 HISTORY OF CENSUS COUNTY DIVISIONS (CCDS)

When CCDs were introduced prior to the 1950 Census, few alternatives were available for the provision of statistical data related to relatively stable, subcounty geographic units. Census tracts were defined in only a subset of metropolitan area counties. MCDs existed in all counties, but in some states, MCD boundaries changed frequently enough that they were not useful for comparing statistical data from one decade to another.

For much of the period from the 1950 Census through the 1980 Census, county subdivisions (MCDs and CCDs) provided the only subcounty unit of geography at which data users could obtain statistical data for complete coverage of counties nationwide. The introduction of block numbering areas (BNAs) in counties without census tracts for the 1990 Census offered an alternate subcounty entity for which data could be tabulated. For Census 2000, the Census Bureau introduced census tracts nationwide (in many counties, BNAs were simply relabeled as “census tracts”), increasing the dissemination of, and ability to analyze, data at the census tract level, and providing an alternative set of subcounty statistical geographic areas in each county in addition to MCDs and CCDs. Nevertheless, CCDs and MCDs remain useful for presenting subcounty statistics and, in less populous counties containing only one or two census tracts, can provide greater spatial resolution when analyzing the distribution of population and characteristics.

APPENDIX D HISTORY OF AMERICAN INDIAN AREAS IN THE DECENNIAL CENSUS

The first constitutionally mandated population census in the United States was conducted in 1790. During the period 1790 through 1850, American Indians were enumerated during the decennial censuses only if living among the general population. It was not until 1860 that American Indians living on tribal lands in the western half of the United States were enumerated as a unique population group, but tabulations were not made available for tribal territories or geographic entities. An effort was made for the 1880 Census to enumerate and present data for American Indians living on specific, federally recognized AIRs, but this effort was not completed, and data were available only for tribes in the state of California, as well as parts of Dakota Territory and Washington Territory. The 1890 Census was the first in which American Indian data were collected and presented for individual AIRs, including the now-former AIRs in Indian Territory (now part of Oklahoma); this practice continued through the 1910 Census. American Indian geographic entities were not recognized for the 1920 through 1960 censuses; thus, while American Indians were identified and enumerated, data were not available for the AIRs in which many lived. This decision was reversed with the 1970 Census for which the Census Bureau presented data for 115 AIRs. Still, there was no systematic program for the collection and reporting of all AIR boundaries.

The Census Bureau began to report data systematically for a variety of AIAs starting with the 1980 Census, when it identified and presented data for a more complete inventory of AIRs. The Census Bureau worked with the Bureau of Indian Affairs (BIA) within the U.S. Department of the Interior (DOI) to identify boundaries for AIRs for federally recognized tribes, and with state government officials to identify boundaries for AIRs for state-recognized tribes, by obtaining maps depicting their legally established boundaries. Tribal ORTLs and American Indian subreservation areas (the latter now called tribal subdivisions) were both identified for the first time as geographic entities for the decennial census. To provide data for federally recognized tribes in Oklahoma that formerly had AIRs, the Census Bureau identified a single geographic entity called the Historic Areas of Oklahoma.

The American Indian geographic programs implemented for the 1980 Census were continued with some improvements and additions for the 1990 Census. The Census Bureau began collecting boundaries and reporting data for individual ORTLs (i.e., allotments) in addition to tribal ORTLs, as long as the lands were under a tribe or tribes' governmental authority, or were clearly identified with a particular tribe, tribal government, and/or AIR. The Census Bureau introduced the Tribal Review Program prior to the 1990 Census, which gave the affected federally recognized tribes the opportunity to review, and update if needed, the boundaries of their AIRs and/or ORTLs. The Census Bureau also replaced the single entity Historic Areas of Oklahoma with tribal jurisdiction statistical areas (TJSAs—now called OTSAs) whose boundaries were intended to correspond with those of the individual former AIRs in Oklahoma. In addition, as part of the continuing effort to improve the presentation of data for American Indians, the Census Bureau adopted the TDSA concept to identify lands associated with federally or state recognized tribes that did not have an AIR or ORTL. American Indian subreservation areas (now called tribal subdivisions) were not defined for the 1990 Census. The Census Bureau also offered tribal officials with an AIR and/ or ORTL the opportunity to provide suggestions for 1990

Census tabulation block boundaries on their AIR and ORTL through the Block Definition Project (BDP), similar to the Block Boundary Suggestion Project portion of the Redistricting Data Program.

In preparation for Census 2000, the Census Bureau continued to work with tribal governments and federal and state agencies, as well as the Census Race and Ethnic Advisory Committee (REAC) of the American Indian and Alaska Native (AIAN) populations (referred to hereafter as AIAN REAC), to improve the identification of AIAs. For federally recognized tribes, the Census Bureau offered programs to collect updated AIR and ORTL boundaries directly from the tribal governments using the 1990 Census boundaries as a baseline. The Tribal Review Program was offered a second time in 1997 and again enabled officials of all federally recognized American Indian tribes with an AIR or ORTL to review and, if necessary, update the Census Bureau's maps of their AIRs and/or ORTLs before Census 2000. The Tribal Review Program also included updating and correcting the roads and other geographic features shown on the Census Bureau's maps, and providing suggestions for Census 2000 block boundaries in the BDP. The Tribal Review Program, prior to Census 2000, also gave tribes in Oklahoma the opportunity to review the delineation of their 1990 Census TJSAs. Census 2000 was the first decennial census for which census tracts were defined throughout the United States. American Indian tribes benefited from this change as the Census Bureau allowed tribal governments of federally recognized American Indian tribes with an AIR or ORTL to delineate census tracts without regard to state or county boundaries, provided the AIR/ORTL had a 1990 Census population of at least 1,000.

Beginning in 1998, the Census Bureau included federally recognized American Indian tribes with an AIR and/or ORTL in its annual BAS, thus replacing the once a decade Tribal Review Program. All AIRs and ORTLs included in the 2000 BAS were also included in the Census 2000 Boundary Validation Program (BVP). The BVP offered a final opportunity for tribal leaders to review the Census Bureau's depiction of their AIR/ORTL boundaries prior to Census 2000 and provide any updates to ensure those boundaries were shown correctly as of January 1, 2000 (the reference date of the boundaries used for Census 2000 data tabulations). To support tribal requests for data by administrative subdivisions, the Census Bureau again offered tribal officials the opportunity to delineate American Indian tribal subdivisions (similar to the 1980 Census sub-reservation areas).

For Census 2000, on the recommendation of the AIAN REAC, the Census Bureau adopted the state-designated American Indian statistical area (SDAISA) to represent geographic areas for state-designated tribes that lacked AIRs and ORTLs, thus distinguishing these areas from TDSAs, which continued to represent geographic areas associated with federally recognized tribes that lacked AIRs and ORTLs. The designation TJSAs was changed to OTSAs to more accurately reflect that these entities were defined solely to present statistical information, and did not represent areas in which legal jurisdiction was conferred or inferred by the federal government.

The 2010 Census provided an opportunity to enhance the Census Bureau's ability to provide meaningful, statistically relevant data about federal and state-recognized tribes. Two statistical entities, tribal tracts and tribal block groups, were redefined to provide federally recognized tribes with AIRs greater control and flexibility in delineating such areas. The final criteria and guidelines for TDSAs and SDTSAs (formerly known as SDAISAs) encouraged tribes without an

AIR and/or ORTL to delineate geographic areas that more effectively present the important data for their populations. SDAISAs were renamed to SDTSAs to create a more consistent naming convention for Census Bureau tribal entities. SDTSAs, TDSAs, OTSAs, tribal subdivisions defined within OTSAs, tribal block groups, and tribal tracts were referred to collectively as “tribal statistical areas” as they are not legally defined geographic entities. These entities were included in the new TSAP, a more inclusive term to refer to the delineation process for all the tribal statistical areas for the decennial census. This program facilitated the definition and delineation of tribal statistical areas, and enhanced the ability of tribes to acquire meaningful data about their tribal members.

For the 2020 Census, the TSAP program integrates back into PSAP. The same criteria established in 2010 are in effect for 2020 Census PSAP.

APPENDIX E SUPPLEMENTAL SOURCES FOR PSAP REVIEW

This section describes four supplemental sources to consider using while performing PSAP review: paper maps and Adobe .pdf files, TIGERweb, American Indian Areas layer, and parcel boundaries. Not all of these sources may be available or applicable to each participant.

Paper maps and Adobe .pdf files

The Census Bureau determined it beneficial to all PSAP tribal participants to provide a set of large format paper maps depicting the entirety of the tribal entity and associated tribal statistical geographies, regardless of the product preference selected during the invitation phase. By providing the paper maps, if a participant determines they cannot use GUPS, they do not have to wait for the Census Bureau to change the product preference and ship the paper map materials. This eliminates any delay that would affect their 120-day review timeframe. The paper maps provide an additional resource, outside of the GUPS environment, for participants to use while conducting their review. Refer to the Tribal Paper Respondent Guide enclosed with the delineation materials for instructions on updating the paper map materials.

In addition to the paper maps, the Census Bureau is providing the Adobe .pdf files of the paper maps on the “Data disc.” Participants use Adobe Reader software to view these files on their computer, outside of GUPS. These files are for reference only and are not editable. Participants do not use the Adobe .pdf files for update.

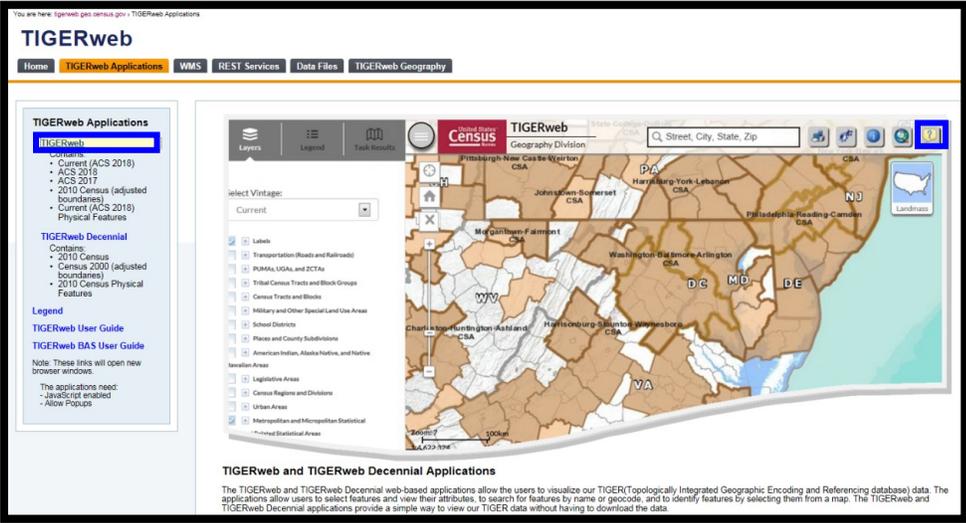
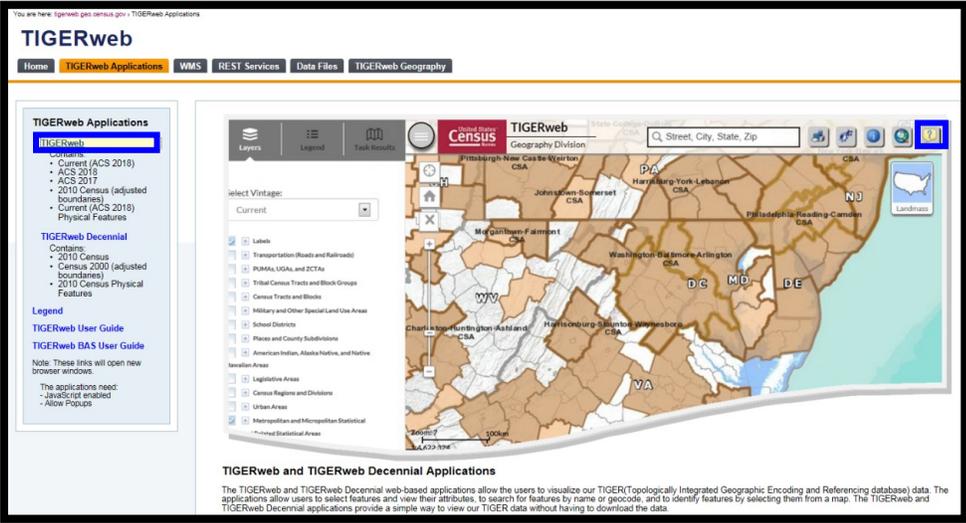
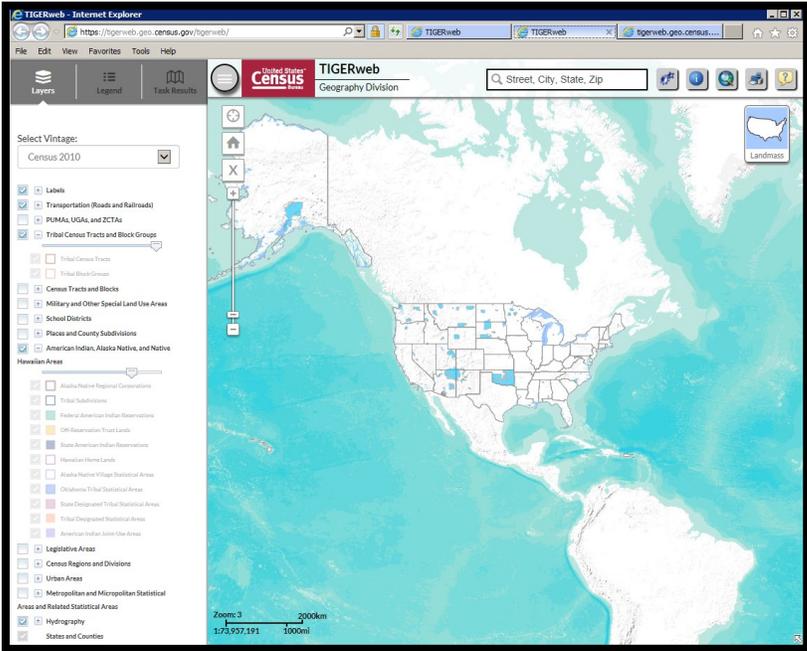
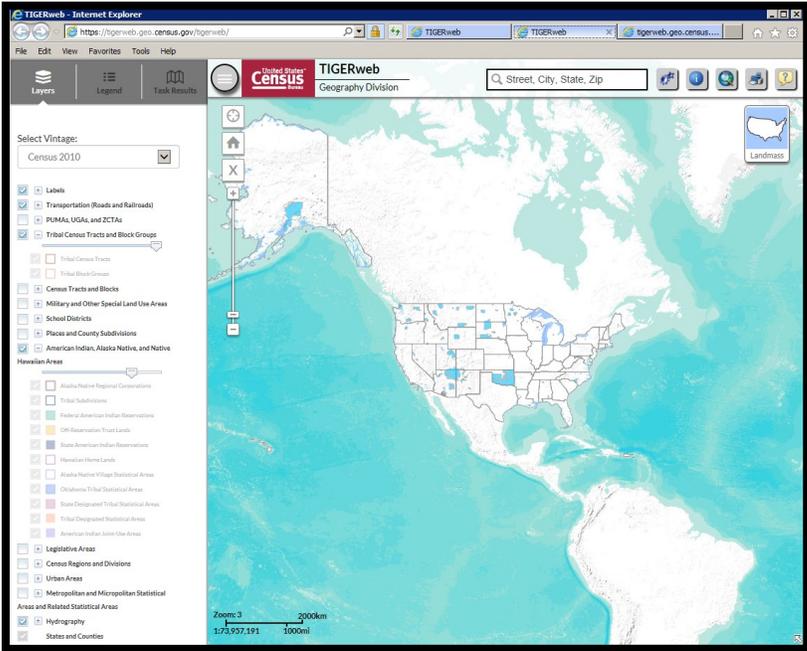
TIGERweb

The Census Bureau’s TIGERweb online map viewer, located at <https://tigerweb.geo.census.gov/tigerweb/>, allows participants to view the Census Bureau's 2010 census geographies layers outside of the GUPS environment. TIGERweb allows viewing, at street level detail, features such as roads, waterways, and county, place/city, CDP, tribal census tracts and tribal block groups, census tracts and block groups, and satellite imagery.

Participants may find this additional tool beneficial to visualize the 2010 tribal census tracts and tribal block groups. Because it resides outside of GUPS, participants can open TIGERweb in a separate window or on a second, dual monitor for a side-by-side visual comparison. Follow the steps in **Table 58** for instructions on accessing and using TIGERweb.

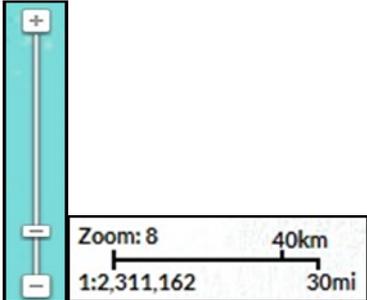
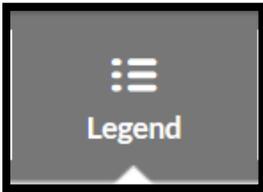
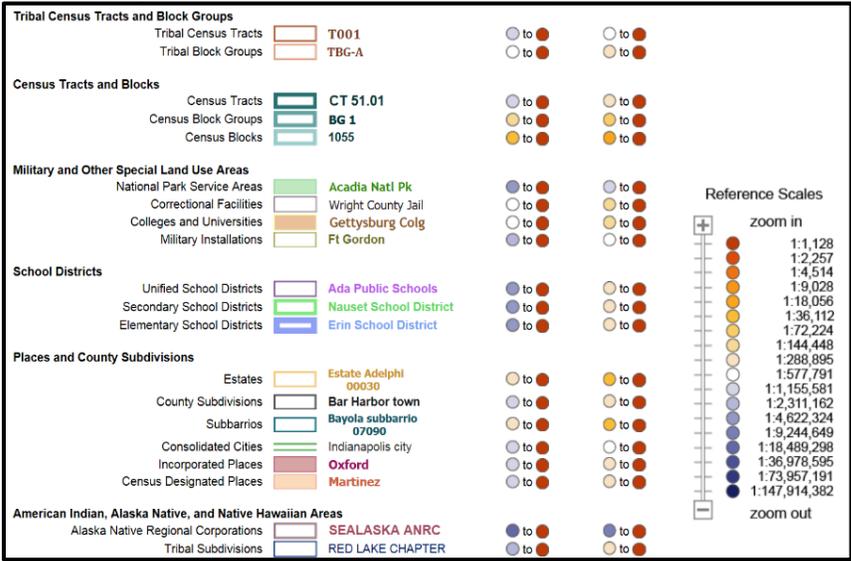
Table 58: Display the TIGERweb Online Map Viewer

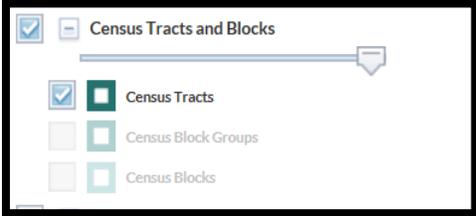
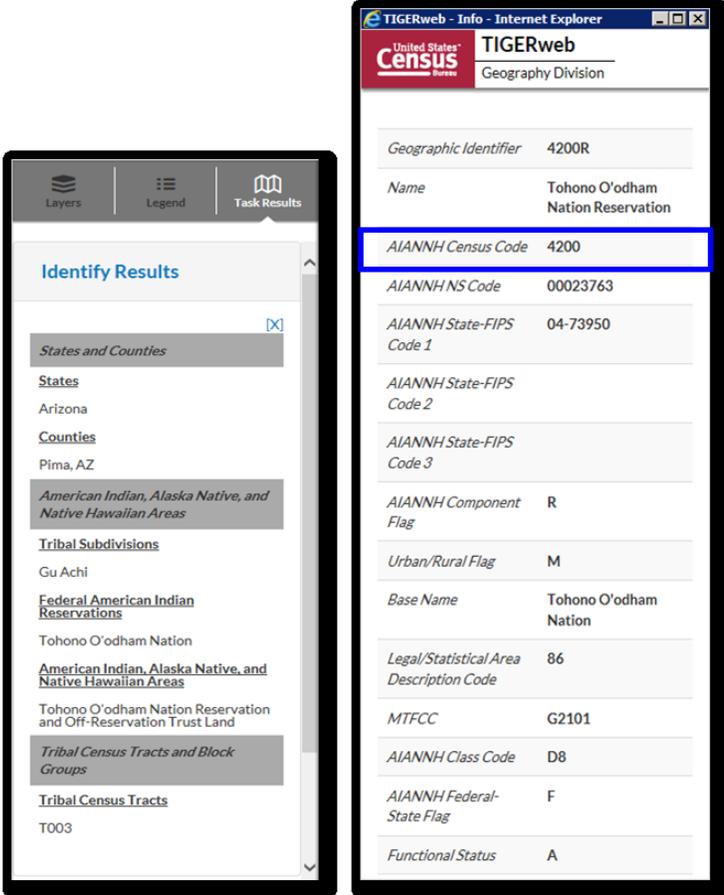
Step	Action and Result
Step 1	Navigate to the TIGERweb web site located at: https://tigerweb.geo.census.gov/ . TIGERweb currently supports Microsoft Internet Explorer, Mozilla Firefox, Opera, and Google Chrome internet browsers.
Step 2	Click the TIGERweb Applications tab.

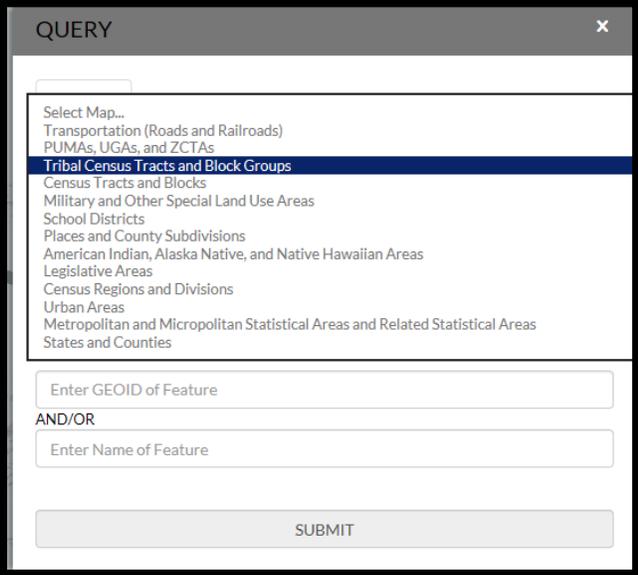
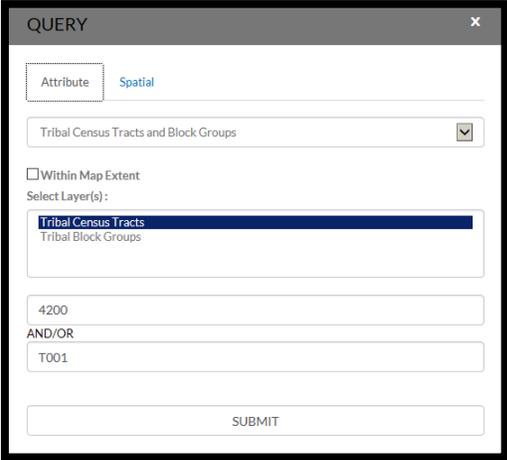
Step	Action and Result
Step 3	<p>Click the TIGERweb link under the orange TIGERweb Applications tab on the left side of the screen. Do not click the TIGERweb Decennial link. The built-in user guide is located by clicking the “Help/About” icon in the upper right corner of the TIGERweb window.</p>
	
Step 4	<p>After opening TIGERweb the map display, navigation tools, the Layers panel, a legend, and map vintage becomes visible.</p>
	
	<p>The Layers panel shows the list of available features and geographic areas. Several display upon startup organized into separate groups, called map services. The geographic type forms the basis of the groupings. Expand each map service by clicking on the ‘+’ symbol to see all of the available layers that include physical features such as roads and water features, as well as legal and statistical boundaries, census blocks and incorporated places. Limit the amount of data on the map by selecting only the applicable types of linear features and geographic entities. Click on the ‘+’ sign to expand a map layer and view the ‘Slider’ tool to make the layer more or less transparent.</p>

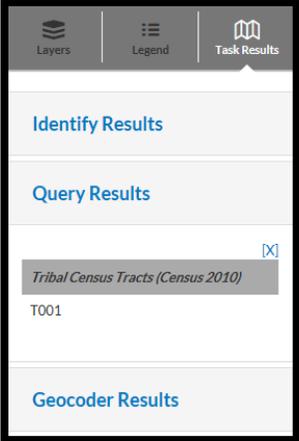
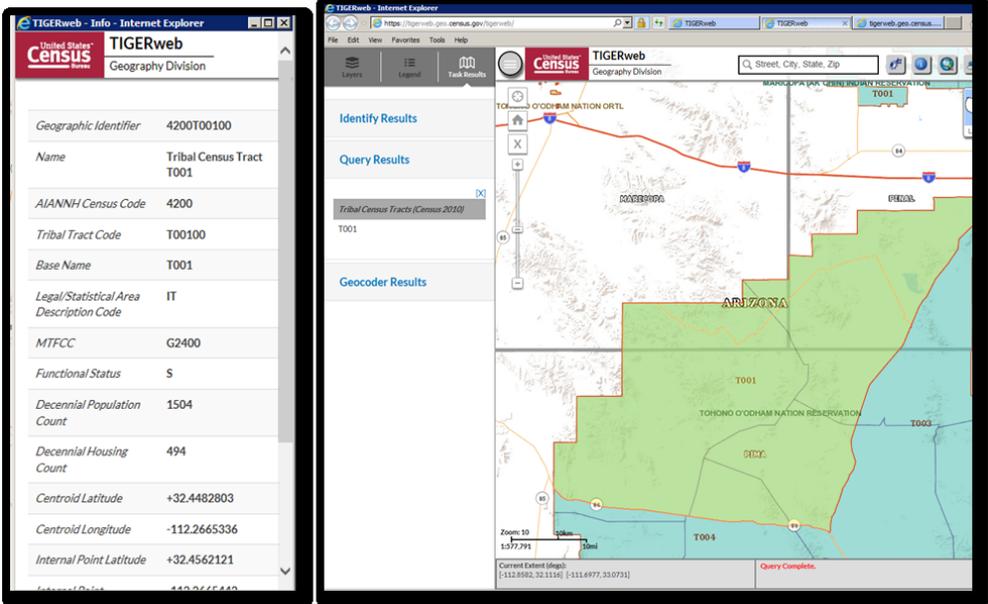
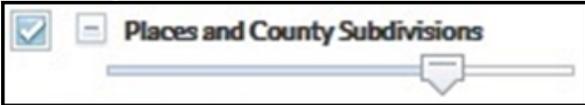
Step	Action and Result
<p>Step 5</p>	<p>The Select Vintage from the drop-down menu in the Layers panel shows the vintages of TIGERweb geographies that are available for display in the application. Select Census 2010 to view the 2010 geographies. Click on the '+' sign next to each map service in the Layers panel to expand the map service and view the layers within it. <i>This example shows the selection of the Transportation, Tribal Census Tracts and Block Groups, American India, Alaska Native, and Native Hawaiian Areas, and Hydrography map layers.</i></p> <div data-bbox="630 428 1073 1730" data-label="Image"> </div> <p>The features and geographic areas contained in the map services do not immediately appear because each layer has a range of zoom levels at which it will display. In other words, visibility of layers is scale dependent. More details appear when zooming in on the map. Table 59 provides a summary of many of TIGERweb tools and functionality.</p>

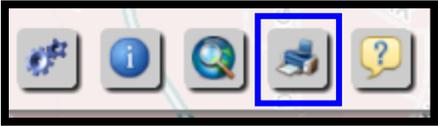
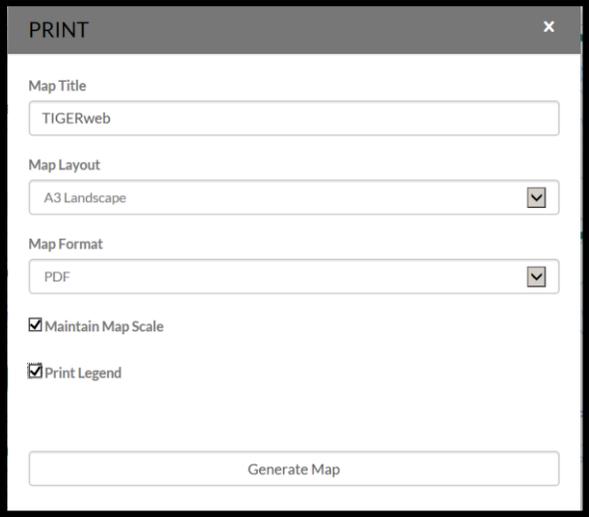
Table 59: TIGERweb Tools and Functions

Step	Action and Result
<p>Step 1</p>	<p>The vertical Zoom In Scale Bar, shown on the left. Click on the '+' to zoom in for more detail or click on the '-' to zoom out for less detail. By rolling the wheel on the computer's mouse, participants can zoom in or zoom out from the current scale.</p> <p>Note: At Zoom level 6, counties appear; at zoom level 9, Census Tracts and Places appear, at zoom level 10, Roads and Railroads appear, and at zoom level 13, Block Groups appear.</p> 
<p>Step 2</p>	<p>Click the Legend tool at the top of the screen to view the Detailed Legend and layers symbology.</p> 
<p>Step 3</p>	<p>Click the Detailed Legend to see at what zoom level the layer and labels appear.</p> 

Step	Action and Result
Step 4	<p>Click off the Legend and back in the Layers panel to turn them on or off to display boundaries for only active layers. <i>The example shows the Census Block Groups and Census Blocks unchecked.</i></p> 
Step 5	<p>One of the easiest ways to determine the Census Code for each tribal entity (needed for the next step) is to use the Identify button along the top right of the TIGERweb window.</p>  <p>After zooming into the area of interest, click the Identify button and then click anywhere inside of the tribal entity displayed on the screen. <i>The Task Results window populates with Identify Results with all of the information about the exact area clicked.</i></p>  <p>Click the name listed beneath the Federal American Indian Reservations link to open a separate window of detailed information.</p> <p>Tohono O'odham Nation has an AIANNH Census Code of 4200. Use this information in the next step.</p>

Step	Action and Result
<p>Step 6</p>	<p>TIGERweb allows PSAP participants to quickly locate an entity visually using the Zoom In tool or by using the Query button to search for a tribal census tract or tribal block group by the geographic ID, also known as GEOID of the tribal entity and geography.</p> <p>To locate a 2010 Tribal Census Tract: Select the Query button along the top right of the TIGERweb window.</p>  <p>From the Select Map drop-down menu, select Tribal Census Tracts and Block Groups.</p>  <p>Select to highlight the Tribal Census Tracts from the Select Layer(s) list. Enter the tribal entity's four-digit GEOID number (4200 for tribal entity Tohono O'odham Nation) and enter the tribal census tract code beneath the AND/OR section (T001). Locate the four-digit tribal entity code from the earlier Identify action in Step 5. Locate the tribal census tract code from the 2010 population and housing unit list or from the Identify Results window shown in Step 5.</p>  <p>Click Submit.</p>

Step	Action and Result
	<p>To locate a 2010 Tribal Block Group, execute the same steps described above, except from the Tribal Census Tracts and Block Groups menu select the Tribal Block Groups from the Select Layer(s) list. Enter the tribal entity's four digit GEOID number (4200 for tribal entity Tohono O'odham Nation) and enter the tribal block group code beneath the AND/OR section (A). Click Submit. <i>This returns all of the "A" tribal block groups in the tribal entity.</i></p>
<p>Step 6</p>	<p>Similar to the Identify Results action, the Task Results serves up the Query Results. Click the Query Results tab within the Task Results menu. <i>TIGERweb displays the result(s) of the query.</i></p> 
<p>Step 7</p>	<p>Click the value within the Query Result section, <i>TIGERweb displays the Info panel containing attribute data for the queried entity.</i></p>  <p>Minimize or close the Info panel by clicking on the '-' or 'x' symbols in the top right of the Info panel, respectively. <i>Clicking on the Query Result makes TIGERweb display the selected entity (tribal census tract T001) highlighted in the center of the map.</i></p>
<p>Step 8</p>	<p>Change the transparency of each layer within the Layers panel by moving the sliding bar below the layer name to the left or right.</p> 

Step	Action and Result
<p>Step 9</p>	<p>TIGERweb allows users to select landmass, satellite imagery, or terrain as a background of the map display from the upper right corner of the map view. <i>The Landmass displays by default when opening TIGERweb.</i> To change options click the button to toggle through all three choices. Select the Satellite button to display satellite imagery.</p> 
<p>Step10</p>	<p>Click the Print button when using TIGERweb to print and save a map. <i>The PRINT window displays.</i></p>  <p>From the PRINT window, select a Map Title, Map Layout, Map Format, then Click the Generate Map to create a map and print.</p>  <p>This functionality allows participants to generate their own hardcopy of any area of interest.</p>

With the tools and functionality described above, participants can navigate their PSAP tribal entity outside of GUPS and may find this easier for comparison sake.

American Indian Area Layer

The American Indian Area layer within GUPS provides a supplemental source for understanding what entities cause regular census tracts to code in the 94XX range and can serve as a very strong legal feature for establishing and correcting census tract and block group boundaries.

Note: This layer will not exist within GUPS for counties without an American Indian Area.

The Census Bureau reserves the 94XX code series for standard census tracts that are delineated within, or primarily to cover, an American Indian Reservation or off-reservation trust land while also adhering to the standard census tract criteria. Some areas of the country, primarily in the Southwest, have counties with the majority of tracts coded to the 94XX range. Major changes to reservation areas happen infrequently, so the Census Bureau does not anticipate that PSAP will produce any new 94XX coded tracts.

Parcel Boundaries

In some situations, non-visible, legal, linear features can be preferred as boundaries for tribal census tracts and tribal block groups. At the smallest scale, participants can use parcel boundaries for reference to developments or contiguous personal plots if no other solution for splitting an area is present. Parcel boundaries are particularly useful when working tribal census tracts that contain neighborhoods characterized by cul-de-sacs that form ‘dangling’ edges in the database, meaning that there is frequently not a closed circuit of visible features available to connect all of the housing units associated with the development.

Participants with access to digital map data for parcels can utilize the **Manage Layers toolbar** to add external data. Review [Section 7.4.3](#) for details on using the specific buttons with respect to the local data type.

APPENDIX F MAF/TIGER FEATURE CLASSIFICATION CODES

The MAF/TIGER Feature Classification Code (MTFCC) is a 5-digit code assigned by the Census Bureau to classify and describe geographic objects or features in Census Bureau MAF/TIGER products. Participants may need these codes if they edit existing or add new linear features for creating new statistical boundaries.

An electronic list is located within the technical documentation for the TIGER/Line Shapefiles on the Census Bureau’s website <<https://www.census.gov/geo/maps-data/data/tiger-line.html>>. Within that specific documentation, it is **Appendix E**.

Table 60: MTFCCs, Feature Classes, and Descriptions

MTFCC	Feature Class	Description
C3022	Mountain Peak or Summit	A prominent elevation rising above the surrounding level of the Earth’s surface.
C3023	Island	An area of dry or relatively dry land surrounded by water or low wetland [including archipelago, atoll, cay, hammock, hummock, isla, isle, key, moku and rock].
C3024	Levee	An embankment flanking a stream or other flowing water feature to prevent overflow.
C3026	Quarry (not water-filled), Open Pit Mine or Mine	An area from which commercial minerals are or were removed from the Earth; not including an oilfield or gas field.
C3027	Dam	A barrier built across the course of a stream to impound water and/or control water flow.
C3061	Cul-de-sac	An expanded paved area at the end of a street used by vehicles for turning around. For mapping purposes, the Census Bureau maps it only as a point feature.
C3062	Traffic Circle	A circular intersection allowing for continuous movement of traffic at the meeting of roadways.
C3066	Gate	A movable barrier across a road.
C3067	Toll Booth	A structure or barrier where a fee is collected for using a road.
C3071	Lookout Tower	A manmade structure, higher than its diameter, used for observation.
C3074	Lighthouse Beacon	A manmade structure, higher than its diameter, used for transmission of light and possibly sound generally to aid in navigation.
C3075	Tank/Tank Farm	One or more manmade structures, each higher than its diameter, used for liquid (other than water) or gas storage or for distribution activities.
C3076	Windmill Farm	One or more manmade structures used to generate power from the wind.
C3077	Solar Farm	One or more manmade structures used to generate power from the sun.
C3078	Monument or Memorial	A manmade structure to educate, commemorate, or memorialize an event, person, or feature.
C3079	Boundary Monument Point	A material object placed on or near a boundary line to preserve and identify the location of the boundary line on the ground.
C3080	Survey Control Point	A point on the ground whose position (horizontal or vertical) is known and can be used as a base for additional survey work.

MTFCC	Feature Class	Description
C3081	Locality Point	A point that identifies the location and name of an unbounded locality (e.g., crossroad, community, populated place or locale).
C3085	Alaska Native Village Official Point	A point that serves as the core of an Alaska Native village and is used in defining Alaska Native village statistical areas.
G2100	American Indian Area	A legally defined state- or federally recognized reservation and/or off-reservation trust land (excludes statistical American Indian Areas).
G2120	Hawaiian Home Land	A legal area held in trust for the benefit of Native Hawaiians.
G2130	Alaska Native Village Statistical Area	A statistical geographic entity that represents the residences, permanent and/or seasonal, for Alaska Natives who are members of or receiving governmental services from the defining legal Alaska Native Village corporation.
G2140	Oklahoma Tribal Statistical Area	A statistical entity identified and delineated by the Census Bureau in consultation with federally recognized American Indian tribes that have no current reservation, but had a former reservation in Oklahoma.
G2150	State-designated Tribal Statistical Area	A statistical geographic entity identified and delineated for the Census Bureau by a state-appointed liaison for a state-recognized American Indian tribe that does not currently have a reservation and/or lands in trust.
G2160	Tribal Designated Statistical Area	A statistical geographic entity identified and delineated for the Census Bureau by a federally recognized American Indian tribe that does not currently have a reservation and/or off-reservation trust land.
G2170	American Indian Joint Use Area	An area administered jointly and/or claimed by two or more American Indian tribes.
G2200	Alaska Native Regional Corporation	Corporate entities established to conduct both business and nonprofit affairs of Alaska Natives pursuant to the Alaska Native Claims Settlement Act of 1972 (Public Law 92-203). There are twelve geographically defined ANRCs and they are all within and cover most of the State of Alaska (the Annette Island Reserve-an American Indian reservation-is excluded from any ANRC). The boundaries of ANRCs have been legally established.
G2300	Tribal Subdivision	Administrative subdivisions of federally recognized American Indian reservations, off-reservation trust lands, or Oklahoma tribal statistical areas (OTSAs). These entities are internal units of self-government or administration that serve social, cultural, and/or economic purposes for the American Indians on the reservations, off-reservation trust lands, or OTSAs.
G2400	Tribal Census Tract	A relatively small and permanent statistical subdivision of a federally recognized American Indian reservation and/or off-reservation trust land, delineated by American Indian tribal participants or the Census Bureau for the purpose of presenting demographic data.
G2410	Tribal Block Group	A cluster of census blocks within a single tribal census tract delineated by American Indian tribal participants or the Census Bureau for presenting demographic data.
G3100	Combined Statistical Area	A grouping of adjacent metropolitan and/or micropolitan statistical areas that have a degree of economic and social integration, as measured by commuting.

MTFCC	Feature Class	Description
G3110	Metropolitan and Micropolitan Statistical Area	An area containing a substantial population nucleus together with adjacent communities having a high degree of economic and social integration with that core, as measured by commuting. Defined using whole counties and equivalents.
G3120	Metropolitan Division	A county or grouping of counties that is a subdivision of a Metropolitan Statistical Area containing an urbanized area with a population of 2.5 million or more.
G3200	Combined New England City and Town Area	A grouping of adjacent New England city and town areas that have a degree of economic and social integration, as measured by commuting.
G3210	New England City and Town Metropolitan and Micropolitan Statistical Area	An area containing a substantial population nucleus together with adjacent communities having a high degree of economic and social integration with that core, as measured by commuting. Defined using Minor Civil Divisions (MCDs) in New England.
G3220	New England City and Town Division	A grouping of cities and towns in New England that is a subdivision of a New England City and Town Area containing an urbanized area with a population of 2.5 million or more.
G3500	Urban Area	Densely settled territory that contains at least 2,500 people. The subtypes of this feature are Urbanized Area (UA), which consists of 50,000 + people and Urban Cluster, which ranges between 2,500 and 49,999 people.
G4000	State or Equivalent Feature	The primary governmental divisions of the United States. The District of Columbia is treated as a statistical equivalent of a state for census purposes, as is Puerto Rico.
G4020	County or Equivalent Feature	The primary division of a state or state equivalent area. The primary divisions of 48 states are termed County, but other terms are used such as Borough in Alaska, Parish in Louisiana, and Municipio in Puerto Rico. This feature includes independent cities, which are incorporated places that are not part of any county.
G4040	County Subdivision	The primary divisions of counties and equivalent features for the reporting of Census Bureau data. The subtypes of this feature are Minor Civil Division, Census County Division/Census Subarea, and Unorganized Territory. This feature includes independent places, which are incorporated places that are not part of any county subdivision.
G4050	Estate	Estates are subdivisions of the three major islands in the United States Virgin Islands (USVI).
G4060	Subbarrio (Subminor Civil Division)	Legally defined divisions (subbarrios) of minor civil divisions (barrios-pueblo and barrios) in Puerto Rico.
G4110	Incorporated Place	A legal entity incorporated under state law to provide general-purpose governmental services to a concentration of population. Incorporated places are generally designated as a city, borough, municipality, town, village, or, in a few instances, have no legal description.
G4120	Consolidated City	An incorporated place that has merged governmentally with a county or minor civil division, but one or more of the incorporated places continues to function within the consolidation. It is a place that contains additional separately incorporated places.
G4210	Census Designated Place	A statistical area defined for a named concentration of population and the statistical counterpart of an incorporated place.

MTFCC	Feature Class	Description
G4300	Economic Census Place	The lowest level of geographic area for presentation of some types of Economic Census data. It includes incorporated places, consolidated cities, census designated places (CDPs), minor civil divisions (MCDs) in selected states, and balances of MCDs or counties. An incorporated place, CDP, MCD, or balance of MCD qualifies as an economic census place if it contains 5,000 or more residents, or 5,000 or more jobs, according to the most current data available.
G5020	Census Tract	Relatively permanent statistical subdivisions of a County or equivalent feature delineated by local participants as part of the Census Bureau's Participant Statistical Areas Program.
G5030	Block Group	A cluster of census blocks having the same first digit of their four-digit identifying numbers within a Census Tract. For example, block group 3 (BG 3) within a Census Tract includes all blocks numbered from 3000 to 3999.
G5035	Block Area Grouping	A user-defined group of islands forming a single census tabulation block. A BAG must: (1) consist of two or more islands, (2) have a perimeter entirely over water, (3) not overlap, and (4) not cross the boundary of other tabulation geographies, such as county or incorporated place boundaries.
G5040	Tabulation Block	The lowest-order census defined statistical area. It is an area, such as a city block, bounded primarily by physical features but sometimes by invisible city or property boundaries. A tabulation block boundary does not cross the boundary of any other geographic area for which the Census Bureau tabulates data. The subtypes of this feature are Count Question Resolution (CQR), current, and census.
G5200	Congressional District	The 435 areas from which people are elected to the U.S. House of Representatives. Additional equivalent features exist for state equivalents with nonvoting delegates or no representative. The subtypes of this feature are 106th, 107th, 108th, 109th, and 111th Congressional Districts, plus subsequent Congresses.
G5210	State Legislative District (Upper Chamber)	Areas established by a state or equivalent government from which members are elected to the upper or unicameral chamber of a state governing body. The upper chamber is the senate in a bicameral legislature, and the unicameral case is a single house legislature (Nebraska).
G5220	State Legislative District (Lower Chamber)	Areas established by a state or equivalent government from which members are elected to the lower chamber of a state governing body. The lower chamber is the House of Representatives in a bicameral legislature.
G5240	Voting District	The generic name for the geographic features, such as precincts, wards, and election districts, established by state, local, and tribal governments for the purpose of conducting elections.
G5400	Elementary School District	A geographic area within which officials provide public elementary grade-level educational services for residents.
G5410	Secondary School District	A geographic area within which officials provide public secondary grade-level educational services for residents.
G5420	Unified School District	A geographic area within which officials provide public educational services for all grade levels for residents.
G6120	Public-Use Microdata Area	A decennial census area with a population of at least 100,000 or more persons for which the Census Bureau provides selected

MTFCC	Feature Class	Description
		extracts of household-level data that are screened to protect confidentiality.
G6300	Traffic Analysis District	An area delineated by Metropolitan Planning Organizations (MPOs) and state Departments of Transportation (DOTs) for tabulating journey-to-work and place-of-work data. A Traffic Analysis District (TAD) consists of one or more Traffic Analysis Zones (TAZs).
G6320	Traffic Analysis Zone	An area delineated by Metropolitan Planning Organizations (MPOs) and state Departments of Transportation (DOTs) for tabulating journey-to-work and place-of-work data.
G6330	Urban Growth Area	An area defined under state authority to manage urbanization that the Census Bureau includes in the MAF/TIGER® System in agreement with the state.
G6350	ZIP Code Tabulation Area (Five-Digit)	An approximate statistical-area representation of a U.S. Postal Service (USPS) 5-digit ZIP Code service area.
G6400	Commercial Region	For presenting economic statistical data, municipios in Puerto Rico are grouped into commercial regions.
H1100	Connector	A known, but nonspecific, hydrographic connection between two nonadjacent water features.
H2025	Swamp/Marsh	A poorly drained wetland, fresh or saltwater, wooded or grassy, possibly covered with open water [includes bog, cienega, marais and pocosin].
H2030	Lake/Pond	A standing body of water that is surrounded by land.
H2040	Reservoir	An artificially impounded body of water.
H2041	Treatment Pond	An artificial body of water built to treat fouled water.
H2051	Bay/Estuary/Gulf/Sound	A body of water partly surrounded by land [includes arm, bight, cove and inlet].
H2053	Ocean/Sea	The great body of salt water that covers much of the earth.
H2060	Gravel Pit/Quarry filled with water	A body of water in a place or area from which commercial minerals were removed from the Earth.
H2081	Glacier	A body of ice moving outward and down slope from an area of accumulation. An area of relatively permanent snow or ice on the top or side of a mountain or mountainous area [includes ice field and ice patch].
H3010	Stream/River	A natural flowing waterway [includes anabranch, awawa, branch, brook, creek, distributary, fork, kill, pup, rio, and run].
H3013	Braided Stream	A natural flowing waterway with an intricate network of interlacing channels.
H3020	Canal, Ditch or Aqueduct	An artificial waterway constructed to transport water, to irrigate or drain land, to connect two or more bodies of water, or to serve as a waterway for watercraft [includes lateral].
K1225	Crew-of-Vessel Location	A point or area in which the population of military or merchant marine vessels at sea are assigned, usually being at or near the home port pier.
K1231	Hospital/Hospice/Urgent Care Facility	One or more structures where the sick or injured may receive medical or surgical attention [including infirmary].
K1235	Juvenile Institution	A facility (correctional and non-correctional) where groups of juveniles reside; this includes training schools, detention centers, residential treatment centers and orphanages.

MTFCC	Feature Class	Description
K1236	Local Jail or Detention Center	One or more structures that serve as a place for the confinement of adult persons in lawful detention, administered by a local (county, municipal, etc.) government.
K1237	Federal Penitentiary, State Prison, or Prison Farm	An institution that serves as a place for the confinement of adult persons in lawful detention, administered by the federal government or a state government.
K1238	Other Correctional Institution	One or more structures that serve as a place for the confinement of adult persons in lawful detention, not elsewhere classified or administered by a government of unknown jurisdiction.
K1239	Convent, Monastery, Rectory, Other Religious Group Quarters	One or more structures intended for use as a residence for those having a religious vocation.
K1246	Community Center	Community Center.
K2110	Military Installation	An area owned and/or occupied by the Department of Defense for use by a branch of the armed forces (such as the Army, Navy, Air Force, Marines, or Coast Guard), or a state owned area for the use of the National Guard.
K2165	Government Center	A place used by members of government (either federal, state, local, or tribal) for administration and public business.
K2167	Convention Center	An exhibition hall or conference center with enough open space to host public and private business and social events.
K2180	Park	Parkland defined and administered by federal, state, and local governments.
K2181	National Park Service Land	Area—National parks, National Monuments, and so forth—under the jurisdiction of the National Park Service.
K2182	National Forest or Other Federal Land	Land under the management and jurisdiction of the federal government, specifically including areas designated as National Forest, and excluding areas under the jurisdiction of the National Park Service.
K2183	Tribal Park, Forest, or Recreation Area	A place or area set aside for recreation or preservation of a cultural or natural resource and under the administration of an American Indian tribe.
K2184	State Park, Forest, or Recreation Area	A place or area set aside for recreation or preservation of a cultural or natural resource and under the administration of a state government.
K2185	Regional Park, Forest, or Recreation Area	A place or area set aside for recreation or preservation of a cultural or natural resource and under the administration of a regional government.
K2186	County Park, Forest, or Recreation Area	A place or area set aside for recreation or preservation of a cultural or natural resource and under the administration of a county government.
K2187	County Subdivision Park, Forest, or Recreation Area	A place or area set aside for recreation or preservation of a cultural or natural resource and under the administration of a minor civil division (town/township) government.
K2188	Incorporated Place Park, Forest, or Recreation Area	A place or area set aside for recreation or preservation of a cultural or natural resource and under the administration of a municipal government.
K2189	Private Park, Forest, or Recreation Area	A privately owned place or area set aside for recreation or preservation of a cultural or natural resource.

MTFCC	Feature Class	Description
K2190	Other Park, Forest, or Recreation Area (quasi-public, independent park, commission, etc.)	A place or area set aside for recreation or preservation of a cultural or natural resource and under the administration of some other type of government or agency such as an independent park authority or commission.
K2191	Post Office	An official facility of the U.S. Postal Service used for processing and distributing mail and other postal material.
K2193	Fire Department	Fire Department.
K2194	Police Station	Police Station.
K2195	Library	Library.
K2196	City/Town Hall	City/Town Hall.
K2400	Transportation Terminal	A facility where one or more modes of transportation can be accessed by people or for the shipment of goods; examples of such a facility include marine terminal, bus station, train station, airport and truck warehouse.
K2424	Marina	A place where privately owned, light-craft are moored.
K2432	Pier/Dock	A platform built out from the shore into the water and supported by piles. This platform may provide access to ships and boats, or it may be used for recreational purposes.
K2451	Airport or Airfield	A manmade facility maintained for the use of aircraft [including airstrip, landing field and landing strip].
K2452	Train Station, Trolley or Mass Transit Rail Station	A place where travelers can board and exit rail transit lines, including associated ticketing, freight, and other commercial offices.
K2453	Bus Terminal	A place where travelers can board and exit mass motor vehicle transit, including associated ticketing, freight, and other commercial offices.
K2454	Marine Terminal	A place where travelers can board and exit water transit or where cargo is handled, including associated ticketing, freight, and other commercial offices.
K2455	Seaplane Anchorage	A place where an airplane equipped with floats for landing on or taking off from a body of water can debark and load.
K2456	Airport—Intermodal Transportation Hub/Terminal	A major air transportation facility where travelers can board and exit airplanes and connect with other (i.e. non-air) modes of transportation.
K2457	Airport—Statistical Representation	The area of an airport adjusted to include whole 2000 census blocks used for the delineation of urban areas
K2458	Park and Ride Facility/Parking Lot	A place where motorists can park their cars and transfer to other modes of transportation.
K2459	Runway/Taxiway	A fairly level and usually paved expanse used by airplanes for taking off and landing at an airport.
K2460	Helicopter Landing Pad	A fairly level and usually paved expanse used by helicopters for taking off and landing.
K2540	University or College	A building or group of buildings used as an institution for post-secondary study, teaching, and learning [including seminary].
K2543	School or Academy	A building or group of buildings used as an institution for preschool, elementary or secondary study, teaching, and learning [including elementary school and high school].
K2545	Museum, Visitor Center, Cultural Center, or Tourist Attraction	An attraction of historical, cultural, educational or other interest that provides information or displays artifacts.

MTFCC	Feature Class	Description
K2561	Golf Course	A place designed for playing golf.
K2582	Cemetery	A place or area for burying the dead [including burying ground and memorial garden].
K2586	Zoo	A facility in which terrestrial and/or marine animals are confined within enclosures and displayed to the public for educational, preservation, and research purposes.
K3544	Place of Worship	A sanctified place or structure where people gather for religious worship; examples include church, synagogue, temple, and mosque.
L4010	Pipeline	A long tubular conduit or series of pipes, often underground, with pumps and valves for flow control, used to transport fluid (e.g., crude oil, natural gas), especially over great distances.
L4020	Powerline	One or more wires, often on elevated towers, used for conducting high-voltage electric power.
L4031	Aerial Tramway/Ski Lift	A conveyance that transports passengers or freight in carriers suspended from cables and supported by a series of towers.
L4110	Fence Line	A manmade barrier enclosing or bordering a field, yard, etc., usually made of posts and wire or wood, used to prevent entrance, to confine, or to mark a boundary.
L4121	Ridge Line	The line of highest elevation along a ridge.
L4125	Cliff/Escarpment	A very steep or vertical slope [including bluff, crag, head, headland, nose, palisades, precipice, promontory, rim and rimrock].
L4130	Point-to-Point Line	A line defined as beginning at one location point and ending at another, both of which are in sight.
L4140	Property/Parcel Line (Including PLSS)	This feature class may denote a nonvisible boundary of either public or private lands (e.g., a park boundary) or it may denote a Public Land Survey System or equivalent survey line.
L4150	Coastline	The line that separates either land or Inland water from Coastal, Territorial or Great Lakes water. Where land directly borders Coastal, Territorial or Great Lakes water, the shoreline represents the Coastline. Where Inland water (such as a river) flows into Coastal, Territorial or Great Lakes water, the closure line separating the Inland water from the other class of water represents the Coastline.
L4165	Ferry Crossing	The route used to carry or convey people or cargo back and forth over a waterbody in a boat.
P0001	Nonvisible Linear Legal/Statistical Boundary	A legal/statistical boundary line that does not correspond to a shoreline or other visible feature on the ground.
P0002	Perennial Shoreline	The more-or-less permanent boundary between land and water for a water feature that exists year-round.
P0003	Intermittent Shoreline	The boundary between land and water (when water is present) for a water feature that does not exist year-round.
P0004	Other non-visible bounding Edge (e.g., Census water boundary, boundary of an aerial feature)	A bounding Edge that does not represent a legal/statistical boundary, and does not correspond to a shoreline or other visible feature on the ground. Many such Edges bound area landmarks, while many others separate water features from each other (e.g., where a bay meets the ocean).
R1011	Railroad Feature (Main, Spur, or Yard)	A line of fixed rails or tracks that carries mainstream railroad traffic. Such a rail line can be a main line or spur line, or part of a rail yard.
R1051	Carline, Streetcar Track, Monorail, Other Mass	Mass transit rail lines (including lines for rapid transit, monorails, streetcars, light rail, etc.) that are typically inaccessible to

MTFCC	Feature Class	Description
	Transit	mainstream railroad traffic and whose tracks are not part of a road right-of-way.
R1052	Cog Rail Line, Incline Rail Line, Tram	A special purpose rail line for climbing steep grades that is typically inaccessible to mainstream railroad traffic. Note that aerial tramways and streetcars (which may also be called “trams”) are accounted for by other MTFCCs and do not belong in R1052.
S1100	Primary Road	Primary roads are generally divided, limited-access highways within the interstate highway system or under state management, and are distinguished by the presence of interchanges. These highways are accessible by ramps and may include some toll highways.
S1200	Secondary Road	Secondary roads are main arteries, usually in the U.S. Highway, State Highway or County Highway system. These roads have one or more lanes of traffic in each direction, may or may not be divided, and usually have at-grade intersections with many other roads and driveways. They often have both a local name and a route number.
S1400	Local Neighborhood Road, Rural Road, City Street	Generally, a paved non-arterial street, road, or byway that usually has a single lane of traffic in each direction. Roads in this feature class may be privately or publicly maintained. Scenic park roads would be included in this feature class, as would (depending on the region of the country) some unpaved roads.
S1500	Vehicular Trail (4WD)	An unpaved dirt trail where a four-wheel drive vehicle is required. These vehicular trails are found almost exclusively in very rural areas. Minor, unpaved roads usable by ordinary cars and trucks belong in the S1400 category.
S1630	Ramp	A road that allows controlled access from adjacent roads onto a limited access highway, often in the form of a cloverleaf interchange. These roads are unaddressable and do not carry a name in the MAF/TIGER System.
S1640	Service Drive usually along a limited access highway	A road, usually paralleling a limited access highway, which provides access to structures along the highway. These roads can be named and may intersect with other roads.
S1710	Walkway/Pedestrian Trail	A path that is used for walking, being either too narrow for or legally restricted from vehicular traffic.
S1720	Stairway	A pedestrian passageway from one level to another by a series of steps.
S1730	Alley	A service road that does not generally have associated addressed structures and is usually unnamed. It is located at the rear of buildings and properties and is used for deliveries.
S1740	Private Road for service vehicles (logging, oil fields, ranches, etc.)	A road within private property that is privately maintained for service, extractive, or other purposes. These roads are often unnamed.
S1750	Internal U.S. Census Bureau use	Internal U.S. Census Bureau use.
S1780	Parking Lot Road	The main travel route for vehicles through a paved parking area.
S1820	Bike Path or Trail	A path that is used for manual or small, motorized bicycles, being either too narrow for or legally restricted from vehicular traffic.
S1830	Bridle Path	A path that is used for horses, being either too narrow for or legally restricted from vehicular traffic.
S2000	Road Median	The unpaved area or barrier between the carriageways of a divided road.

APPENDIX G ACCEPTABLE LINEAR FEATURES FOR STATISTICAL BOUNDARIES

Below is a list of linear features that make acceptable or questionable statistical geography boundaries. Refer to this list while reviewing existing boundaries, but also when creating new geographies or modifying existing boundaries. Except in instances described in [Table 5](#) for non-visible boundaries, this appendix is the source for the Census Bureau during their review of participant submissions. A complete list of MAF/TIGER Classification Codes (MTFCCs) is located on the Census Bureau’s geography reference website: <https://www.census.gov/geo/reference/mtfcc.html>.

Table 61: Acceptable Linear Features for Statistical Boundaries

Feature Name	MTFCC	Acceptable	Questionable
Aerial Tramway/Ski Lift	L4031	X	
Alley	S1730	X	
Bike Path or Trail	S1820		X
Braided Stream	H3013	X	
Bridle Path/Horse Trail	S1830		X
Canal, Ditch, or Aqueduct (intermittent)	H3020		X
Canal, Ditch, or Aqueduct (perennial)	H3020	X	
Carline, Streetcar Track, Monorail, Other Mass Transit Rail	R1051	X	
Cliff/Escarpment	L4125	X	
Cog Rail Line, Incline Rail Line, Tram	R1052	X	
Dam	C3027	X	
Fence Line	L4110		X
Ferry Crossing	L4165	X	
Intermittent Shoreline	P0003		X
Interstate Highway or Primary Road with limited access	S1100	X	
Levee	C3024	X	
Local Neighborhood Road, Rural Road, City Street	S1400	X	
Parking Lot Road	S1780		X
Perennial Shoreline	P0002	X	
Pier/Dock	K2432	X	
Pipeline (above ground)	L4010	X	
Point-to-Point Line	L4130		X
Power line (above ground, high tension)	L4020	X	
Primary Road without limited access, US Highway, State Highway, or County Highway, Secondary and connecting roads	S1200	X	

Feature Name	MTFCC	Acceptable	Questionable
Private Driveway	S1750		X
Private Road for service vehicles (logging, oil fields, ranches, etc.)	S1740		X
Property/Parcel Line (PLSS, airport, airfield, military installation or other)	L4140		X
Railroad Feature (Main, Spur, or Yard)	R1011	X	
Ridge Line	L4121	X	
Runway/Taxiway	K2459	X	
Service Drive/Service Road (usually along limited access highway)	S1640	X	
Stairway	S1720		X
Stream/River (intermittent)	H3010		X
Stream/River (perennial)	H3010	X	
Vehicular Trail (4WD)	S1500		X
Walkway/Pedestrian Trail	S1710		X

APPENDIX H STANDARD STREET TYPE ABBREVIATIONS

The street name types and their abbreviations shown below provide background to PSAP participants that may need to add linear features in order to split statistical geographies. Use the standard street type abbreviations to assign the street type to any newly added linear features that are streets.

Table 62: Standard Street Type Abbreviations

Street Type	Standard Abbreviation
ALLEY	ALY
ANNEX	ANX
ARCADE	ARC
AVENUE	AVE
BAYOU	BYU
BEACH	BCH
BEND	BND
BLUFF	BLF
BLUFFS	BLFS
BOTTOM	BTM
BOULEVARD	BLVD
BRANCH	BR
BRIDGE	BRG
BROOK	BRK
BROOKS	BRKS
BURG	BG
BURGS	BGS
BYPASS	BYP
CAMP	CP
CANYON	CYN
CAPE	CPE
CAUSEWAY	CSWY
CENTER	CTR
CENTERS	CTRS
CIRCLE	CIR
CIRCLES	CIRS
CLIFF	CLF
CLIFFS	CLFS
CLUB	CLB
COMMON	CMN
COMMONS	CMNS
CORNER	COR
CORNERS	CORS
COURSE	CRSE
COURT	CT
COURTS	CTS
COVE	CV
COVES	CVS
CREEK	CRK
CRESCENT	CRES
CREST	CRST
CROSSING	XING

Street Type	Standard Abbreviation
CROSSROAD	XRD
CROSSROADS	XRDS
CURVE	CURV
DALE	DL
DAM	DM
DIVIDE	DV
DRIVE	DR
DRIVES	DRS
ESTATE	EST
ESTATES	ESTS
EXPRESSWAY	EXPY
EXTENSION	EXT
EXTENSIONS	EXTS
FALL	FALL
FALLS	FLS
FERRY	FRY
FIELD	FLD
FIELDS	FLDS
FLAT	FLT
FLATS	FLTS
FORD	FRD
FORDS	FRDS
FOREST	FRST
FORGE	FRG
FORGES	FRGS
FORK	FRK
FORKS	FRKS
FORT	FT
FREEWAY	FWY
GARDEN	GDN
GARDENS	GDNS
GATEWAY	GTWY
GLEN	GLN
GLENS	GLNS
GREEN	GRN
GREENS	GRNS
GROVE	GRV
GROVES	GRVS
HARBOR	HBR
HARBORS	HBRs
HAVEN	HVN
HEIGHTS	HTS
HIGHWAY	HWY
HILL	HL
HILLS	HLS
HOLLOW	HOLW
INLET	INLT
ISLAND	IS
ISLANDS	ISS
ISLE	ISLE
JUNCTION	JCT

Street Type	Standard Abbreviation
JUNCTIONS	JCTS
KEY	KY
KEYS	KYS
KNOLL	KNL
KNOLLS	KNLS
LAKE	LK
LAKES	LKS
LAND	LAND
LANDING	LNDG
LANE	LN
LIGHT	LGT
LIGHTS	LGTS
LOAF	LF
LOCK	LCK
LOCKS	LCKS
LODGE	LDG
LOOP	LOOP
MALL	MALL
MANOR	MNR
MANORS	MNRS
MEADOW	MDW
MEADOWS	MDWS
MEWS	MEWS
MILL	ML
MILLS	MLS
MISSION	MSN
MOTORWAY	MTWY
MOUNT	MT
MOUNTAIN	MTN
MOUNTAINS	MTNS
NECK	NCK
ORCHARD	ORCH
OVAL	OVAL
OVERPASS	OPAS
PARK	PARK
PARKS	PARK
PARKWAY	PKWY
PARKWAYS	PKWY
PASS	PASS
PASSAGE	PSGE
PATH	PATH
PIKE	PIKE
PINE	PNE
PINES	PNES
PLACE	PL
PLAIN	PLN
PLAINS	PLNS
PLAZA	PLZ
POINT	PT
POINTS	PTS
PORT	PRT

Street Type	Standard Abbreviation
PORTS	PRTS
PRAIRIE	PR
RADIAL	RADL
RAMP	RAMP
RANCH	RNCH
RAPID	RPD
RAPIDS	RPDS
REST	RST
RIDGE	RDG
RIDGES	RDGS
RIVER	RIV
ROAD	RD
ROADS	RDS
ROUTE	RTE
ROW	ROW
RUE	RUE
RUN	RUN
SHOAL	SHL
SHOALS	SHLS
SHORE	SHR
SHORES	SHRS
SKYWAY	SKWY
SPRING	SPG
SPRINGS	SPGS
SPUR	SPUR
SPURS	SPUR
SQUARE	SQ
SQUARES	SQS
STATION	STA
STRAVENUE	STRA
STREAM	STRM
STREET	ST
STREETS	STS
SUMMIT	SMT
TERRACE	TER
THROUGHWAY	TRWY
TRACE	TRCE
TRACK	TRAK
TRAFFICWAY	TRFY
TRAIL	TRL
TRAILER	TRLR
TUNNEL	TUNL
TURNPIKE	TPKE
UNDERPASS	UPAS
UNION	UN
UNIONS	UNS
VALLEY	VLY
VALLEYS	VLYS
VIADUCT	VIA
VIEW	VW
VIEWS	VWS

Street Type	Standard Abbreviation
VILLAGE	VLG
VILLAGES	VLGS
VILLE	VL
VISTA	VIS
WALK	WALK
WALKS	WALK
WALL	WALL
WAY	WAY
WAYS	WAYS
WELL	WL
WELLS	WLS

APPENDIX I SHAPEFILE NAMES

State-based shapefiles exist for use within GUPS. Participants need not worry about opening these files independently from GUPS. The information in this section serves as basic metadata about the files used by GUPS.

PVS_18_v2_<layername>_<SS>.shp, where <SS> is the number corresponding FIPS number for the state, (e.g., “24” corresponds to Maryland) and <layername> is the abbreviation for the shapefile layer, describe in detail below. For example, PVS_18_v2_tbg_24.shp is the tribal block group shapefile layer for Maryland.

Table 63: State Shapefile Names

Shapefile Layer	<layername>
American Indian Areas (AIA) – Legal	aial
2010 American Indian Areas (AIA) – Legal	aial2010
American Indian Areas (AIA) – Statistical	aias
American Indian Tribal Subdivisions (AITS) - Legal	aitsl
American Indian Tribal Subdivisions (AITS) - Statistical	aitss
Alaska Native Regional Corporations (ANRC) – State 02 only	anrc
Block Area Group	bag
Metropolitan Statistical Area/Metropolitan Statistical Area	cbsa
Congressional Districts	cd
Census Designated Place	cdp
Counties and Equivalent Areas	county
2010 Counties and Equivalent Areas	county2010
Elementary School Districts	elsd
Hawaiian Home Lands (HHL) – State 15 only	hhl
County Subdivisions - Legal	mcd
New England City and Town Areas	necta
Incorporated Places	place
2010 Public Use Microdata Areas	puma2010
Secondary School Districts	scsd
State Legislative Districts Lower	sldl
State Legislative District Upper Chambers	sldu
State	state
Tribal Block Groups	tbg
Tribal Census Tracts	tct
2010 Census Tracts	tracts2010
Urban Area	uac
Unified School District State-Based	unsd

County-based shapefiles exist for use within GUPS. Participants need not worry about opening these files independently from GUPS. The information in this section serves as basic metadata about the files used by GUPS.

PVS_18_v2_<layername>_<SSCCC>.shp, where <SSCCC> is the number corresponding FIPS number for the state and county, (e.g. “24001” corresponds to Allegany County, Maryland) and <layername> is the abbreviation for the shapefile layer, describe in detail below. For example, PVS_18_v2_curtracts_24001.shp is the current census tract shapefile layer for Allegany County,

Maryland. The source of the census tracts is still the 2010 geography, but if spatial updates occurred to the 2010 census tracts, they are reflected in this layer, not the tract2010 layer.

Table 64: County Shapefile Names

Shapefile Layer	<layername>
American Indian Areas (AIA) – Legal	aial
American Indian Areas (AIA) – Statistical	aias
American Indian Tribal Subdivisions (AITS) - Legal	aitsl
American Indian Tribal Subdivisions (AITS) - Statistical	aitss
Alaska Native Regional Corporations (ANRC) – State 02 only	anrc
Area Landmark	arealm
Block Area Group	bag
Block Groups	bg
Metropolitan Statistical Area/Metropolitan Statistical Area	cbsa
Census County Division	ccd
Congressional Districts	cd
Census Designated Place	cdp
Consolidated Cities	concity
Counties and Equivalent Areas	county
Census Tracts - Current	curtracts
All Lines	edges
Elementary School Districts	elsd
Topological Faces (2-cells with all geocodes)	faces
Hawaiian Home Lands (HHL) – State 15 only	hhl
County Subdivisions - Legal	mcd
New England City and Town Areas	necta
Offsets	offset
Incorporated Places	place
Point Landmarks	pointlm
2010 Public Use Microdata Areas	puma2010
Secondary School Districts	scsd
State Legislative Districts Lower	sldl
State Legislative Districts Upper	sldu
Subbarrios – State 72 only	submcd
Census Blocks - Current	tabblock
2010 Census Blocks	tabblock2010
2010 Traffic Analysis Delineation	tad2010
2010 Traffic Analysis Zones	taz2010
Tribal Block Groups	tbg
Tribal Census Tracts	tct
2010 Census Tracts	tracts2010
Census Urban Areas	uac
Urban Growth Area	uga
Unified School Districts	unsd
Voting Tabulation Districts	vtd
Hydrography - Area	water
Relationship Tables	<layername>
Address Ranges	addr
Topological Faces - Area Landmark Relationship	areafaces
Topological Faces - Area Hydrography Relationship	hydrofaces
Linear Feature Names - Fielded	allnames

APPENDIX J SHAPEFILE LAYOUTS

This appendix includes several tables with the most common shapefiles used in 2020 Census PSAP and their file layout.

Table 65: Edges Shapefile (PVS_18_v2_edges)

Attribute Field	Length	Type	Description
FID	10	Integer	Feature ID
Shape	8	String	Type of shape (Polyline)
STATEFP	2	String	FIPS state code
COUNTYFP	3	String	FIPS county code
TLID	10	Integer	TIGER/Line Permanent Edge ID
TFIDL	10	Integer	TIGER/Line Permanent Face ID (left)
TFIDR	10	Integer	TIGER/Line Permanent Face ID (right)
MTFCC	5	String	MAF/TIGER Feature Classification Code
FIDELITY	1	String	Indication to a respondent when their entity boundary has changed through spatial enhancement
FULLNAME	40	String	Decoded feature name with abbreviated qualifier, direction, and feature type
SMID	22	Double	Spatial Tmeta ID
SMIDTYPE	1	String	Spatial type
BBSPLG	1	String	Redistricting data project participant's submitted request of an EDGE for selection as a block boundary
CBBFLG	1	String	Indicates the status of an EDGE for a selection as a block boundary
BBSP_2020	1	String	New BBSP flag
CHNG_TYPE	4	String	Type of linear feature update
JUSTIFY	150	String	Justification of change
LTOADD	10	String	Left To address
RTOADD	10	String	Right To address
LFROMADD	10	String	Left From address
RFROMADD	10	String	Right From address
ZIPL	5	String	Left 5-digit ZIP Code
ZIPR	5	String	Right 5-digit ZIP Code
EXTTYP	1	String	Extension type
MTUPDATE	10	Date	Date of last MAF/TIGER update to the edge
RTTYP	1	String	Route type
GUPS	80	String	Used internally by GUPS during digitizing

Table 66: Address Ranges Attribute File (PVS_18_v2_addr)

Attribute Field	Length	Type	Description
OID	8	String	Object ID
TLID	10	Integer	TIGER/Line Permanent Edge ID
STATEFP	2	String	FIPS state code
COUNTYFP	3	String	FIPS county code
FROMHN	12	String	From house number
TOHN	12	String	To house number
SIDE	1	String	Side of feature indicator flag (L or R)
ZIP	5	String	5-digit ZIP Code
PLUS4	4	String	ZIP+4 Code
LFROMADD	10	String	Left From address
LTOADD	10	String	Left To address
RFROMADD	10	String	Right From address
RTOADD	10	String	Right To address
ZIPL	5	String	Left 5-digit ZIP Code
ZIPR	5	String	Right 5-digit ZIP Code
ZIP4L	4	String	Left ZIP+4 Code
ZIP4R	4	String	Right ZIP+4 Code

Table 67: Tribal Block Group Shapefile (PVS_18_v2_tbg)

Attribute Field	Length	Type	Description
FID	10	Integer	Feature ID
Shape	7	String	Type of shape (Polygon)
STATEFP	2	String	FIPS state code (56)
TTRACTCE	6	String	Tribal census tract code (T00101)
TBLKGRPCE	1	String	Tribal block group code (A)
TBLKGRPID	12	String	AIANHCE, TTRACTCE, and TBLKGRPCE (4610T00101A)
AIANNHCE	4	String	Census AI/AN/NH area code (4610)
PARTFLG	1	String	Indicates if only part of a feature is represented (Y or N)
CHNG_TYPE	2	String	Code for type of area update (M, B, E, and G)
EDITED	1	String	GUPS updates to indicate an edit by the participant
HOUSING10	10	Integer	2010 housing unit count
JSTFY_CNTG	150	String	Justification entered by participant to retain noncontiguous statistical geography
JSTFY_SLU	150	String	Justification entered by participant for a special use measurement threshold
JUSTIFY	150	String	Justification of change to attribute of tribal block group
POP10	10	Integer	2010 population count
TBTRACTID	11	String	AIANHCE and TTRACTCE (4610T00101)

Table 68: Tribal Census Tract Shapefile (PVS_18_v2_tct)

Attribute Field	Length	Type	Description
FID	10	Integer	Feature ID
Shape	7	String	Type of shape (Polygon)
STATEFP	2	String	FIPS state code (56)
TTRACTCE	6	String	Tribal census tract code (T00101)
NAME	100	String	Tribal census tract code with decimal if applicable (T001.01) used as label
TTRACTTYP	1	String	Tribal census tract characteristic flag
AIANNHCE	4	String	Census AI/AN/NH area code (4610)
TBTRACTID	11	String	Census AI/AN/NH area code and TTRACTCE (4610T00101)
PARTFLG	1	String	Partial flag indicator
CHNG_TYPE	2	String	Code for type of area update (M, B, E, and G)
EDITED	1	String	GUPS updates to indicate an edit by the participant
HOUSING10	10	Integer	2010 housing unit count
JSTFY_CNTG	150	String	Justification entered by participant to retain noncontiguous statistical geography
JSTFY_NAME	150	String	Justification entered by participant when the name is changed
JSTFY_SLU	150	String	Justification entered by participant for a special use measurement threshold
JUSTIFY	150	String	Justification of change to attribute of tribal census tract
POP10	10	Integer	2010 population count
RELATE	120	String	Relationship description

Table 69: Census Designated Place Shapefile (PVS_18_v2_cdp)

Attribute Field	Length	Type	Description
FID	10	Integer	Feature ID
Shape	7	String	Type of shape (Polygon)
STATEFP	2	String	FIPS State code
COUNTYFP	3	String	FIPS County code
PLACEFP	5	String	FIPS 55 Place code
PLACENS	8	String	ANSI feature code for the place
NAMELSAD	100	String	Name with translated LSAD
LSAD	2	String	Legal / Statistical Area description
FUNCSTAT	1	String	Functional status
CLASSFP	2	String	FIPS 55 class code describing and entity
PARTFLG	1	String	Indicates if only part of a feature is represented (Y or N)
CHNG_TYPE	2	String	Code for type of area update (E, B, G, and X)
EFF_DATE	8	Date	Effective date or vintage
RELATE	120	String	Relationship description
JUSTIFY	150	String	Justification of change
NAME	100	String	Entity name
VINTAGE	2	String	Vintage updated with returned data
POP10	10	Integer	2010 population count
HOUSING10	10	Integer	2010 housing unit count
JSTFY_NAME	150	String	Justification entered by participant when the name is changed

Table 70: American Indian Areas – Legal Shapefile (PVS_18_v2_aial)

Attribute Field	Length	Type	Description
FID	10	Integer	Feature ID
Shape	7	String	Type of shape (Polygon)
STATEFP	2	String	FIPS state code (56)
AIANNHCE	4	String	Census AIANNH code (4610)
COMPTYP	1	String	Indicates if Reservation, Trust Land, or both are present (R, T, or B)
AIANNHFSR	1	String	Flag Indicating level of recognition of an AIA, AN, or NH
NAMELSAD	100	String	Name with translated LSAD (Wind River Reservation)
AIANNHNS	8	String	ANSI numeric identifier for AIA, AN, or NH areas
LSAD	2	String	Legal / Statistical Area description
FUNCSTAT	1	String	Functional status (A for active)
CLASSFP	2	String	FIPS 55 class code describing an entity
PARTFLG	1	String	Partial flag indicator (Y or N)
CHNG_TYPE	2	String	Code for type of area update
EFF_DATE	8	Date	Effective date
AUTHTYPE	1	String	Authorization Type (O – Ordinance, R – Resolution, L – Local Law, S – State Level Action, X – Other)
DOCU	120	String	Supporting documentation
FORM_ID	4	String	Record ID (GUPS only)
AREA	10	Double	Acreage of area update
RELATE	120	String	Relationship description
JUSTIFY	150	Char	Justification of change to attribute of AIA
NAME	100	String	AIA name (Wind River)
VINTAGE	2	String	Vintage updated with returned data
JSTFY_NAME	150	String	Justification entered by participant when the name is changed

Table 71: American Indian Areas – Statistical Shapefile (PVS_18_v2_aias)

Attribute Field	Length	Type	Description
FID	10	Integer	Feature ID
Shape	7	String	Type of shape (Polygon)
STATEFP	2	String	FIPS state code (22)
AIANNHCE	4	String	Census AIANNH code (9515)
COMPTYP	1	String	Indicates if Reservation, Trust Land, or both are present (R, T, or B)
AIANNHFSR	1	String	Flag Indicating level of recognition of an AIA, AN, or NH
NAMELSAD	100	String	Name with translated LSAD (Apache Choctaw SDTSA)
AIANNHNS	8	String	ANSI numeric identifier for AIA, AN, or NH areas (02418775)
LSAD	2	String	Legal / Statistical Area description
FUNCSTAT	1	String	Functional status (S for statistical)
CLASSFP	2	String	FIPS 55 class code describing an entity
PARTFLG	1	String	Indicates if only part of a feature is represented (Y or N)
CHNG_TYPE	2	String	Code for type of area update
EFF_DATE	8	Date	Effective date
RELATE	120	String	Relationship description
JUSTIFY	150	Char	Justification of change to attribute of AIA
NAME	100	String	AIA name (Apache Choctaw)
VINTAGE	2	String	Vintage updated with returned data
JSTFY_NAME	150	String	Justification entered by participant when the name is changed

Table 72: County and Equivalent Areas Shapefile (PVS_18_v2_county)

Attribute Field	Length	Type	Description
FID	1	Integer	Feature ID
Shape	7	String	Type of shape (Polygon)
STATEFP	2	String	FIPS state code
COUNTYFP	3	String	FIPS county code
COUNTYNS	8	String	ANSI feature code for the county or equivalent feature
NAMELSAD	100	String	Name with translated LSAD code
LSAD	2	String	Legal/Statistical Area description code
FUNCSTAT	1	String	Functional status
CLASSFP	2	String	FIPS 55 class code describing an entity
CHNG_TYPE	2	String	Code for type of area update
EFF_DATE	8	Date	Effective date or vintage
AUTHTYPE	1	String	Authorization type (O – Ordinance, R – Resolution, L – Local Law, S – State Level Action, X – Other)
DOCU	120	String	Supporting documentation
FORM_ID	4	String	Record ID (GUPS only)
AREA	10	Double	Acreage of area update
RELATE	120	String	Relationship description
JUSTIFY	150	String	Justification of change to attribute of the county or equivalent area
NAME	100	String	Entity name
VINTAGE	2	String	Vintage updated with returned data