

**U.S. Department of Commerce
U.S. Census Bureau
Moderator: James Whitehorne
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2:00 pm ET**

Coordinator: Welcome and thank you for standing by. All participants will be on a listen-only mode until the question-and-answer session of today's conference. At that time, you may press * (star), then 1 to ask a question from the phone lines.

As a reminder, today's conference is being recorded. If you have any objections, you may disconnect at this time. I would now like to turn the conference over to your host, Mr. James Whitehorne, the Chief of the Census Redistricting and Voting Rights Data Office. Thank you, Mr. Whitehorne. You may now begin.

James Whitehorne: Thank you operator. As the operator mentioned, this is James Whitehorne, and I'm the chief of the Census Redistricting and Voting Rights Data Office.

Before we start the webinar, I just wanted to make the audience aware of a few personnel changes we've had here in the office. Colleen Joyce who was the assistant chief in the office has taken a term assignment with our Island Area Census and will be doing the census of the commonwealth of Northern Mariana Islands, and her position is currently vacant. We also had Evan Neuwirth go onto a civilian role with the U.S. Navy, but we're very happy to announce that William "Web" Adams has stepped into Evan's place to assist us for the next few years, and he's on a detail from our New York regional

office. Web will be taking over for all the states interacting with Evan as the primary point of contact in the Redistricting Data Office.

In addition to Web, we have a few people here today that you already know. We have Jennie Karalewich who's the team lead over geographic operations here in the Redistricting Office. We have Michael Arthur, and we have Matthew Brooks who round out our team of geographers. I want to thank you all for dialing in today. We have a lot of information to share with you. We believe that this information will help you as you work with us to ensure you have as accurate as possible voting districts when we report out the 2020 census data.

As the operator mentioned, this session is recorded, and a video and transcript will be published to our website as soon as it becomes available. We usually have this up within a week or two of the actual session. I'm going to start by going over some voting district background and purpose for those of you because many of you who are familiar with the program and have worked with them for decades, but there are others who are new. So, this'll be new or just a refresher depending on who you are.

What I want to talk about is the voting district project and its purpose which comes from Public Law 94-171. The Public Law 94-171 or P.L. 94-171 directs the Secretary of Commerce to the Census Bureau to establish a program that allows the states to identify the geographic tabulations they need for conducting legislative redistricting after the Decennial Census. Over the years, states have indicated that tabulation blocks and voting districts are those crucial geographies. The redistricting data program allows the states to use a nonpartisan liaison to provide on a voluntary basis input to both blocks and voting districts.

We collected the block boundary suggestions in 2016 and 2017. We started collecting voting districts last year, and we'll continue collecting them this year. Verification of those voting districts will occur this year and next. It's important when participating -- and we'll repeat this probably several times today -- that you follow the guidance for the voting district project if you're doing new voting district and the voting district verification project if you're doing verification of work that you've previously submitted.

There are two separate modules. In the GUPS module, there's different instructions that are participant guides, so regardless of your method of participating, there's different acts that you take whether you're provided with new voting districts for the first time or you're verifying districts. There are some important qualifications around our ability to collect voting districts. For those of you who have not yet provided them, this is your last opportunity to do so.

For those states who were provided their voting districts, this year is the last available for wholesale changes. Although we have a verification window next year from December of 2019 through March of 2020, the updates accepted at that time are intended for correcting relationships with higher levels of geography.

We'll not be able to accept completely new voting districts at that time nor we will be able to accept new block suggestions during that early 2020 window, so just to repeat, we can during this cycle except entirely new voting districts or entire rework of voting districts, but next year, when we're doing a second round of verifications, there'll be some limits. I'm also happy to say that we are providing one last set of prototype blocks that you can review during this year's round of updates.

Each prototype block shows you what the census blocks would look like in 2020 if the geographies of today does not change. While you're doing your voting district updates or verification, there's no need to provide block boundary suggestions for your voting districts. It's actually discouraged. They will automatically become block boundaries when the blocks are created.

An algorithm will be used to create those blocks. However, if you see a block boundary or lack of block family situations that's not related to voting districts that you feel needs to be rectified, we've left those tools active in both the VTD and the VTDV modules of GUPS, so you can provide those limited block family suggestions.

This is also a flexibility, as I mentioned, that will not be available after this year's round of updates, so you can do it during this year's round of updates, but next year, you will not be able to. As far as our schedules today, we anticipate that this will be the last of the webinars that we conduct for the redistricting data program for 2020 at least as far as it goes towards geographic updates.

We will leave the videos of the webinars up on our website through the remainder of the 2020 redistricting data program, however, we do reserve the right to call for another webinar next year if there is a significant enough change when we send those verification materials to you again. We don't anticipate that. We feel that this year's should suffice as far as instructions, but should there be, we may, and we'll make sure that if we do, we will include in your participation packet sufficient information for you to recognize that we're doing that.

As far as the schedule for today, in order to streamline the presentation, we will mostly cover new material since last time. As I mentioned, the previous webinar showing the voting district updates and basic government functionality is still available on the web. We highly encourage those just coming into the program to go back and view that video and then contact us with any questions.

This is not to say that people providing their voting districts for the first time will not get valuable information today. Today will be helpful for new and prior participants because we're going to be discussing issues that we encountered during last year's initial voting district updates, as well as some new tools that were not covered in last year's webinar. We have the session divided up into four sections, and we'll pause between some of these sections to take questions.

When posing a question, it's appreciated if you can state your name and the state from which you're from if you feel comfortable doing so. Please keep in mind that this is being recorded, and it'll be posted through web for public consumption afterwards. If you don't feel comfortable having your question recorded, we are available after the webinar by e-mail and by phone to address any of your concerns or questions then.

Jennie Karalewich is going to start us off by going over the common voting district issues we found during the initial delineation of voting districts last year. Then Mike Arthur will go over enhancements we've made to the GUPS software package. These are enhancements to both the voting district and the voting district verification module of the GUPS. Matthew Brooks will then demonstrate the voting district verification module and have the built-in verification tools to be used to assist you in reviewing your file.

Finally, Mike will bring us home by quickly showing you how to submit your finished file to the Census Bureau using our secure web incoming module, and then after our final round of questions, I'll have a few remarks and just a few random things that didn't fit elsewhere that we just want to make sure you're aware of and we want to reiterate. So, with that, I thank you for your participation today, and I hand it over to Jennie Karalewich.

Jennie Karalewich: Thank you for the introduction, James. Hello, everybody out in webinar land. My name's Jennie Karalewich. I'm the geographic team lead, and I know I've spoken to a lot of you over the years, and if we haven't spoken yet, I'm sure we will during this round of verification. So, I'm going to go ahead and pull up our PowerPoint to begin my part of the presentation.

So, during James' introduction, he went over the VTD verification and VTD verification 2 timeline. Again, VTD verification 1 is the phase that we are in that started in December 2018 and is running through May 31 of 2019. During this phase of verification, the states can provide their election districts, precincts and wards.

You can also perform a review of linear features, add new linear features that were missing, correct misaligned features. You can also update area landmarks, such as state parks, prisons. As well suggest updates to our legal boundaries, which we call our Boundary and Annexation (BAS) updates. During verification 2, again, as James stated, the timeline is from December 2019 through March 2020, and again, this verification phase allows the states to make final adjustments to ensure that your VTD and legal boundaries are aligned. There's something to keep in mind, as well.

So, going into 2020, there are ongoing geographic updates. Everybody's doing their updates to get them in before the 2020 census, so programs, such

as American Indian and Alaska native programs are boundary and annexation surveys, school district updates, local update of census addresses, our participant statistical areas program, new construction, as well as general TIGER updates will be making updates to the data. This, in turn, may affect your VTDs in relationship to legal boundaries.

So, for one last time, they often say that you need to hear things three times to learn them, so again, for voting district verification this year, you can update your VTDs with your features, area landmarks, as well as legal boundary updates, and then for verification 2, we're going to just review VTDs and VTD attributes.

So, now, I'm going to proceed into talking about the data. So, we received your VTDs during the initial delineation last year during 2018. So, I wanted to go over the process that our office does to review the incoming data from the state, any adjustments that we might make to explain maybe why your voting districts look different than what you expected or they may not look different at all.

So, CRVRDO is the name of our office, the Census Redistricting and Voting Rights Data Office, and these are several of the review processes that our office goes through and runs under geographic data. I'm not going to read all of them now because I'm going to go over each one individually. As you can see, we also learn lessons during VTD and are adding new checks during VTDV. So, the first review process I'm going to go over are coverage gaps.

So, VTDs require wall-to-wall coverage within a county. We can't have any faces in TIGER that are not assigned to a VTD value. So, we made sure that all faces in the county have a VTD assigned to them, and we came across some files where there were faces without a VTD value. So, basically, if we

were able to determine which VTD that unassigned face belonged to, we would add it.

But in a case like you see on the screen, we would usually reach out to the state for input on how we should correct this and which VTD these faces belong to. So, over the next few slides, you're going to see why we did this check and how to fix it. It may become a bit redundant, but I wanted to put that on there just to frame the conversation. Our next check were attributes. So, certain attributes are required for the file to be inserted into the mass TIGER database.

If you're using GUPS, GUPS will auto populate these values, and usually, there weren't any missing attributes we had to input. However, if you're not using GUPS, please review the new VTDTV participant guide to review which attributes are needed for the file to be inserted into the mass TIGER database. We did make some edits. So, again, if attributes were missing from the file, we were either able to add them because we knew or we reached out to the state to confirm.

Another check we look for were VTDs that were in small areas. So, you can see in this image here, we have the VTD in green which is in a cul-de-sac which is a separate voting district than the purple one, Voting District 13. So, we look for these because small VTDs possibly could be remnants from 2010 or earlier VTDs. We also have some states do have small area VTDs as a part of their geography. So, when we came across these, we either reached out to the state or we accepted it depending on the state's rules.

Similar to small areas, we look for multiple cycles. Multiple cycles is a fancy census way of saying VTDs that were in several pieces, but they were not contiguous. From this example here, you can see Fondulac 2 voting districts in pink in the upper left corner. Now, if you look in the lower right corner,

you can see that there is a piece of Fondulac 2 in the corner, so we review these instances where the VTD is in multiple pieces.

Again, some instances, the VTD should be separated, but in this example, the little fragment of Fondulac 2 voting district off Ravine Street should probably be removed. It's a remnant from an edit. Again, depending on the state, we either reach out for more clarification or we correct it on our end. Another thing we check for are VTD boundaries. So, VTDs that are submitted to us need to have boundaries that are based on current TIGER/Line or new edges that have been added by the participants.

So, when we receive VTDs that did not have the correct boundaries, we were either able to fix them in house if we needed to add an edge or two, but if they were wide scale VTDs without boundaries, we usually send it back to the state. If we hold up these boundaries to enclose the VTD, you encounter bleed through, and the VTDs do not look like what you plan them to look like.

So, the next few slides, I'm going to talk about adding lines. So, in this example here, I turned off the VTD layer, so you can see that the green line is an add line. They're adding the VTD boundary. The pink line is an existing line that we have in TIGER. So, due to mass TIGER's policy and processing standards, we ask that the incorrect facial features should be deleted and re-added. So, in this case, the pink edge should be flagged for deletion, and the green edge can be added. This tells us that we need to reshape that existing pink line into the green line location.

Again, if we add a handful of instances where the existing line is not flagged for deletion, we would fix them in house, but we would also contact the state if there were many instances of this. Another look at add lines in this

example, we can see that the participant flagged our current roads for deletion with the red line and then added the roads in nearby with the green add lines.

So, they performed it correctly saying this line shouldn't be here. The line should be here. However, these reshapes, the delete and add lines are within our 7.6 meter accuracy rule for mass TIGER database. Generally, if the update is under 7.6 meters, we're not going to accept it because it's within our margin of error. So, in this case, we would strip out the adds and deletes and leave this area as is.

The third add line example is an instance where you can see the participant is adding the screen edge as a VTD boundary. It is mirroring an existing road, and you can see between the new VTD boundary and the existing road, there are no housing units. In cases like this, we would generally strip out the VTD boundary and pull it to the road. This prevents creating smaller sliver blocks that do not have population, and I'm going to talk about this more in a bit.

So, for this example, we have instances where the participant was submitting boundary and annexation survey updates, so you can see that the gray area is an incorporated place. The pink edges are the existing incorporated place boundaries. The participant added new incorporated place lines, and those are flagged in green. However, if you're performing boundary and annexation survey updates, we require that you add the new line, as well as faces, so that we can take the appropriate action.

We cannot just make BAS updates with the line updates alone. When we came across these, we would either contact the state or we would have to strip them out because they were done incorrectly. So, this check is something new that we learned during VTD. We received several files that had overlaps, so when I talk about overlap, I mean spatial and attribute overlaps.

So, on the image on the left, I know it's a little tiny, but you can see that I selected a face, and when I get the information, I see that that face is a 2 VTDs. Our VTDs are wall-to-wall coverage, but faces can only be in one VTD, so there is an overlap there. On the image on the right, you can see that when we look at the attributes, there are several VTD 100s. So, in cases like this, we reached out to the state for guidance because we couldn't assume with either the spatial overlap or the attribute overlap which one was correct.

Another thing that we learned during VTD was the addition of VTD boundary down the medians of double-lane roads. We ask that you do not add your VTD boundaries down the medians of double-lane roads. With our 7.6 meter accuracy, the lack of housing units and the fact that the lanes of the road may be held as block boundaries, it creates issues on our end.

So, when we encounter VTD boundaries that are down double-lane roads, we ask that we would remove the boundaries from the double-lane roads, and we ask that you don't submit them. Generally, we would pull the VTD boundaries to either the northbound, southbound, eastbound or westbound lane. Another thing that we learned during VTD was looking for gaps.

So, you can see in the image to the top left, we have voting district 1 and voting district 2. However, when we input the voting district, you can see that voting district 1 bled through into where voting district 2 is supposed to be. When you zoom into the line dividing voting district 1 and voting district 2, you can see there's a gap. When we're adding the lines to serve as VTD boundaries, they have to snap to existing edges.

When this doesn't occur, you can see the bleed through that we have in this example. Again, depending on the number of gaps, we can either fix that here

or we return the file to the state. So, a main theme for a lot of the examples that I went over, especially the later ones, are what we call slivers, and slivers are created when geographies do not align. So, slivers are small boxes created with a voting district boundary and nearby legal boundaries or highways do not align.

Generally, the sliver boundaries mirror existing boundaries or highways. They do not have populations, and they're small in area. If the slivers are not resolved, they will become census blocks. However, we realize slivers may be unavoidable in certain circumstances. I'm going to go over a few examples. So, this instance is a very simple example, but I think it gets the point across.

You can see that this brown area is the VTD. Offset from the VTD is the incorporated place boundaries. You can see the gray shading. So, the VTD boundary follows the center line of the road, and the incorporated place boundaries is offset from the center of the road. So, VTD boundaries will held as 2020 census block boundaries. So are incorporated place boundaries. So, if we put this VTD through as is, you can see there is the potential for three sliver blocks. Again, these have zero population, they're small in area, and they're mirroring the VTD boundary.

So, to resolve instances like this, our office would pull the VTD boundaries to match the incorporated place boundaries thus removing the potential for slivers. Here is another example. We saw this earlier with an incomplete BAS update. If we updated the VTD boundary as is to this example, you can see in this small example there is at least 11 possible sliver blocks that would be created. We have another example, and we have the incorporated place layer on the left and the VTD layer on the right.

When we overlay them together, we have the creation of sliver blocks, and you can see how quickly these sliver blocks can multiple and add up. Again, we have our median example, and for this example, if we did add the boundary going down the median as requested in this one intersection alone, we're looking at possibly nine sliver blocks being created. So, I know I went over several slides talking about how bad slivers are. We do know that they unavoidable in some circumstances.

We do accept slivers when the geography truly doesn't align. Certain states have laws or legislation that requires VTD boundaries to be in a specific location. For example, Louisiana, VTD boundaries must follow visible features. They don't have the same requirement for incorporated places or other legal boundaries. So, slivers will be created. Also, we don't fix slivers when there is population or housing units in the sliver area. In the examples I showed you, they were small in area with no population.

So, resolving slivers again generally speaking, voting district boundaries align with legal boundaries. If a legal boundary is wrong, a change could be submitted to our back team who'll review the change. However, we ask that you do not perform whole scale realignments of the legal boundaries to match the voting district boundaries. If you're seeing significant discrepancies, we ask that you reach out to our office, and we'll work with you to resolve them.

So, some states submitted the 2010 voting district boundaries during VTD, and this is where we took the 2010 voting district boundaries from TIGER and completed them to 2017 TIGER data. However, boundaries may not be aligned to the same features due to TIGER being updated over those eight years.

So, for example, in 2010, we have an incorporated place called Locust Cove, and Locust Cove 1 VTD shared the same boundary. In 2016, Locust Cove boundary was changed as a part of BAS updates. However, the old boundary line of Main Street could not be deleted because Main Street still exist. So, when the VTDs were conflated, Locust Cove 1 VTD would match the old Locust Cove place boundary Main Street, not the updated one thus creating slivers between the VTDs and other boundaries.

So, that is the end of my quick walkthrough on the checks that we did in our office, fixing slivers. We're going to come back to this later in the presentation, but I think it's time for a question and answer session.

Coordinator: Thank you. If you'd like to ask a question from the audience, please press star [*], then 1, unmute your phone and record your name when prompted. If you need to withdraw your question, please press star [*], then 2. Once again, to ask a question, please press star [*], then 1 and record your name when prompted. One moment, please, while questions queue up.

Deborah Vera: Okay, thank you Katie. So, very quickly before you start queuing up for questions, we just wanted to mention something. Good afternoon, everyone. My name is Deborah Vera and I'm helping the team here in the capacity of WebEx and also the Verizon line. We understand that some of you might be able to hear us over the phone but might be having some issues connecting to the WebEx.

There's a few reasons why that might be the case. If you get the starting WebEx screen, when you click on that link to log in, there might be an option just underneath the starting WebEx that shows up as hyperlink blue text, and it reads running temporary application. If you click on that, you're going to get

a very small downloadable file that will allow you to run the WebEx instead of installing any Java, so give that a try, and hopefully, that works.

An executable file will clear your download. Typically, that is the work around net solution that works best. It's possible that you might be behind a firewall that prevents you, you know, from being able to do that, so if that's the case, just be patient with us, stay on the line, but keep in mind that we are recording this.

The file is an MP4 and will be available for everyone to view after the webinar has concluded. So, again, that's run a temporary application. It should be showing up in the starting WebEx. It's the loading button, and if that doesn't work, please be patient. We'll have the recording available for you within 48 hours or so.

Jennie Karalewich: Katie, do we have any questions?

Coordinator: We do have two questions from the phone lines. Our first question comes from Jennifer Wheeler. Your line is now open.

Jennifer Wheeler: Thank you. Hey, this is Jennifer, and Jennie, I hate to ask you this again because I know you repeated it at least three times, but can you go back to the slide or tell me again what the schedule is for the round 2 of the verification and how that's going to be different than the round 1?

Jennie Karalewich: I'm not upset to answer that all Jennifer. Let me just pull it back up.

Jennifer Wheeler: Thank you.

Jennie Karalewich: I'm just getting the slide right now because there is a silence. So, again, this year for voting district verification going through May 31, 2019 we're allowing a state to make wholesale VTD attribute updates, make any linear future updates, add roads that were missing, realign roads, make any legal boundary updates, so updates to places and make any area landmark updates.

When we go into voting district verification 2, we're asking that you just tweak the VTDs and VTD attributes. So, for example, if the VTD boundary is supposed to line up with the place boundary, and the place boundary was just updated in 2019, we ask that you review it to make sure that they match in 2020. Does that make sense?

Jennifer Wheeler: Yes and no. So, I guess the verification 2 will allow for geometry changes.

Jennie Karalewich: Yes, if you have to draw in a new edge for a VTD boundary, that's totally accepted, but we're asking that you don't add a subdivision of roads that don't impact your VTD.

Jennifer Wheeler: Okay. I think I get it. Then the dates, the timeframe for the second verification?

Jennie Karalewich: We'll be mailing the materials out in December of this year so 2019 through March 31 of 2020, and that is a hard deadline.

Jennifer Wheeler: Is that for the verification 2?

Jennie Karalewich: Yes, that is for verification 2.

Jennifer Wheeler: Okay. December 2019. Okay.

Jennie Karalewich: Verification this year again is May 31, and we ask that you submit before May 31 and on a flow basis while I have your attention.

Jennifer Wheeler: Thank you so much.

Jennie Karalewich: Thank you Jennifer.

Coordinator: Our next question comes from Mark Stratton from Indiana. Your line is now open.

Mark Stratton: Hi, and I have a question about verification, too, as well. As you know, Indiana asked for this, but I want to be certain I understand because the way I heard it described is not what I just heard. I will have counties that will be changing precincts this fall, and we told they'd be able to do that based on the information we got.

I will be able to submit those updates. I have counties that'll change 40 or 50 precincts this fall in anticipation of the census and redistricting. I'll be able to get those precinct changes in in verification 2. I can enter linear feature updates if I need to to be a VTD boundary. I just can't update the legal boundaries or landmark updates. Am I understanding that correctly?

Jennie Karalewich: You're understanding it perfectly Mark. What you stated is correct. When we say full scale VTD updates, I should correct myself. We're asking that you're not submitting VTDs for the first time, so we know Indiana has participated in VTD, we know you're participating in this phase, so that is permitted during VTDV 2.

Mark Stratton: Thank you.

Jennie Karalewich: You're welcome. Thank you.

Coordinator: Once again, if you'd like to ask a question from the phone lines, please press star [*], then 1 and record your name when prompted. We are currently showing no questions in queue.

James Whitehorne: Then we'll go ahead, and Mike Arthur here is going to queue up his presentation, and he's going to demonstrate for you some of the new enhancements that we've added to the GUPS software that works in both the voting district module and in the voting district verification module.

Michael Arthur: Thanks James. Hi, good afternoon, my name is Mike Arthur. I'm a geographer in the Census Redistricting and Voting Rights Data Office. Thank you for taking the time to join us today. I'm going to go over a few of the enhancements that are now available on the current version of GUPS. The first enhancement that I'm going to show is the internet mapping service tool. There is currently census supply imagery inside GUPS.

There are two options for census supply imagery, and they are USGS and Esri. For today's example, I will be using USGS imagery, and across the top, you can choose your census supply imagery. There's an imagery toggle, and you have the option of choosing USGS or Esri, and like I said, today I'll be using USGS imagery. Over here in the layers panel left-hand side, I'm going to turn off VTD current layer to get a better look at the imagery.

We wanted to provide an alternative tool for participants to view imagery outside of GUPS. The new Internet Map Service tool easily allows participants to view imagery in Google Maps or Bing imagery in a separate window. Unfortunately, Google Maps or Bing imagery cannot be brought

into GUPS, but we have made it very easy to view the imagery by simply clicking on the map for the location the user would like to view.

So, I am currently in Loudoun County, Virginia, and I have a parcel of land right here that I would like to get some more imagery on. I see that has the potential for some growth here, and so I am going to go up and click on the Internet Map Service tool, and it tells me to select a point anywhere on the map, click okay, and so I'm going to take it to this parcel of land that I want more information on, and then I have the option to choose Google Maps or Bing Maps.

I'm going to click on Bing Maps to start and click okay, and it pulls up that exact area that I had clicked on. So, I do see that the roads have been finished in this area. I'm going to switch back over to GUPS, so I know that there's been new linear features that have been added, so I make note that later on in the project, I can use the add linear feature tool to add these roads into my project.

I also zoomed out a little bit further. It kind of gives me the history of the parcel of the land. I can see that it just started out as a wooded area, and then it's been developed. Okay. So, that was helpful. So, I'm going to go back to GUPS, and this time, I want to use Google Maps. So, again, I'm going to click on that parcel of land, make sure Google Maps is selected and click okay. Here I can see that there's been even more development in this area.

We have multiple residential structures in this area. So, this gives me a better idea if I need to revisit this voting district for my project. For the next enhancement, I'm going to talk about the improved imported reference file tool. I'm going to pull up the slide here. There are different uses for this tool depending on what module the user is in. For the VTD module, the tool

allows the user to import their VTD layer at the later time in the project, not just only at the start of the project.

So, a user may start a project, make updates and then bring in their VTD layer without starting the project over. The VTD file that is imported may be a tabular equivalency file or shapefile, and when the newly imported VTD file is brought in, it becomes the editable layer, so again, in the VTD module, this tool allows the user to overwrite the VTD layer without having to delete the whole project and start over. This enhancement was suggested by our participants, and we listened to all the feedback that was provided. Switching over to the right-hand column, the VTDV module, the imported reference file tool allows the user to bring in a new reference layer.

The user can start looking at the file and then bring in the reference layer. The file the user chooses to bring in is a comparison file and does not erase the editable layer. This process is the starting point of the VTD verification tool which my colleague, Matt Brooks, will go over in a little bit. Finally, I'm going to go over the updated geography options in the modify area feature tool. I'm going to switch over back to GUPS. So, I'm done with the imagery right now, so I'm going to go back up to this toggle. I'm going to remove USGS imagery.

I'm going to turn back on the VTD current layer. Now, I'm going to open up my modify area feature tool, bring it over here and dock it. So, on this geography select menu, we now have available congressional districts, state legislative district lower and state legislative district upper are now an option in the drop down menu for the modify area feature tool. We are allowing users to make minor fixes.

We don't expect full scale congressional districts and state legislative district updates to come through GUPS at this time. However, when you're viewing your VTDs and notice that a district boundary might have moved and does not align, you can use this tool to move the state legislative district or congressional district to match the VTD. At this time, we'll pause and take questions about enhancements.

Coordinator: Thank you. Once again, if you'd like to ask a question from the phone lines, please press star [*], then 1, unmute your phone and record your name when prompted. If you need to withdraw your question, please press star [*], then 2. One moment, please, while questions queue up. Once again, if you'd like to ask a question from the phone lines, please press star [*], then 1 and record your name when prompted. The first question today comes from Matt Trainer from Ohio. Your line is now open.

Matt Trainer: Hi there. I was just curious if you could tell us do you have a date for the USGS imagery that is in the GUPS software?

Jennie Karalewich: The USGS imagery is NAPP, and NAPP is a patchwork of different vintages, and we're not able to determine that date through GUPS for you to easily see.

Matt Trainer: Okay.

James Whitehorne: Just a word of caution at the moment, we're recommending that at the moment people use the Esri imagery as preferred. We've been told that during the lapse in funding for the federal government that the Alaska and Hawaii imagery has gone down at USGS, so it can cause problems if you're trying to access it in GUPS, so for the meantime until things come back around, we're suggesting you try Esri imagery first.

Matt Trainer: Understood, thank you.

Jennie Karalewich: Thank you.

Coordinator: We are showing no other questions from the phone lines.

James Whitehorne: All right. Thank you. Now, we're going to have Matthew Brooks, and he's going to go over some specific functionalities that's now been built into the new voting district verification module.

Matthew Brooks: Hello everyone, my name is Matt Brooks. I'm a geographer here in the Redistricting and Voting Rights Data Office. Today, I'm going to be going over starting a project in our new VTD module and the tools we have on place to help you out. To start, you go to map management. You can use map management to start a new project or return to one in progress.

That will be familiar to those of you that submitted data to us during the initial phase of VTD collection. Map management will open automatically when you start up, but if it is closed or you need to return to it, switch projects, you can always click right here. As you scroll down to your voting district, you switch your project, and you scroll down to voting district project verification here and then your state and your county.

Today, I'll be using Louisiana and St. Helena Parish. Map management will then give you the option to select your data force to build your project. You can use the CD or DVD that we sent you in the mail, your computer if you stored your data there, but for ease of use and speed, we highly recommend Census Web. After this, you get the option in for your reference data set.

This is meant to help you compare your latest data, the reference data set that we currently have in TIGER. As Jennie mentioned if you submitted VTDs last year they might appear differently for a variety of reasons. Importing a reference layer will help you identify those changes easily. You can import your reference file or shapefile or text or you can proceed with verification without a reference file. When you do, do your input, you'll need to match your headers to our census headers.

You can see in the shapefile import the user has connected their STATEEP header to our census state header and so on. We have four required fields for shapefile import. For tabular equivalency import, we have a couple different options for doing it. If you have your state county track block all in one large GEOID you can use this import option and then also import your VTDs here.

If you have an extended GEOID that combines your state country track block and VTD, you can use this option, and then if you have it separate as in this example, you can do it. So, this next slide shows our new import shapefile message that we added to let you know that GUPS might take some time to complete your shapefile and overlapping VTDs, and depending on the county size, this could take a while. Although it might look like GUPS is frozen, please do not cancel the process. Also, you do need to click okay, so remember to do that.

And now that I have my Parish open, I would recommend running VTD verification tool immediately. If you did not import a reference layer, you'll need to import one to run the verification tool. This tool will highlight any discrepancies between your reference layer and what we currently have in TIGER. Those areas with discrepancies will be marked with a red crosshatch pattern, and the tool will also output a list of errors.

There are four different types of errors including census not in VTD reference layer, missing VTD, missing VTD reference and then also VTD mismatch. So, let's just discuss what those errors mean. Census VTD not in reference, file errors occur when the VTD code is not present in the reference layer. This can occur if you change any VTD code since the initial phase of VTD collection. Missing VTD errors, occurs when the current working layer does not cover all TIGER faces. This can occur if you delete any VTDs or if you miss a phase from your sign in area again.

You won't see this if you run the verification tool at the start of a project since all counties in TIGER have wall-to-wall coverage. You might see it if you run the verification tool in the middle. The criteria view tool also picks up holes in the current layer. Missing VTD reference, errors occur when you put in reference files that does not cover all TIGER faces.

This often happens around the county boundaries especially on rivers and lakes. Then the last one, VTD mismatch errors are based on VTDST field errors. These tie in with the first error, census VTD not in VTD reference file errors fixing broad census VTD not in VTD reference file errors resolve a bunch of these face-based errors quickly. Now, I'm going to GUPS and give you a live demo.

Okay, now that I have my parish open, before running the verification tool and before I fix those errors, I'd like to go over the table contents. We have our current layer here so this is after I've imported a reference layer. You can see I have my current layer. This is what you will be submitting to us at the Census Bureau for review. You can see it. Notice also that the labels are in black.

Let me just turn off the MCD labels, so you can see all of them. So, the current layer, the colorful one and labels are black, and we also have our reference layer. This is what we've inputted, and those labels are red, and then it's just a bold black outline. Let me just put that back. Now I will run the verification tool, and we'll see what we have if I double click there, and the verification tool is located right here. You can see that we did get some fallout when they dropped us over in the corner. Just a caveat, at the beginning of the fallout, the verification tool is coded blue meaning that errors are for your information only.

You do not need to fix all this exports to the census, but you do need to fix them if you want TIGER to match your reference layer. So, looking at my first one, I see 005-1 precinct. 5-1 does not exist in the reference layer. This is a census VTD, not a VTD reference error. So, just a reminder, you can use this drop down to go through any of your different types of errors. But just seeing that that is a census VTD, not VTD reference file error, I just want to see if they're going to associate it with a face error.

We can see that there are several, so hopefully, fixing the first error will help us knock out a lot of these other later errors. So, I'll go back up to this first one, I'll click fix, and the modify area feature tool will come up. So, I'm going to dock it over here. Just so I know what's going on over here, I'd just like to see what I have for my reference file. I'm going to use the identify tool. I'll click, it showed all the geography.

All right. You can make sure your current geography button. It should be good now. There we go. Usually, I docked it on the other side. Here you can see, this is the VTDST code that we have in our reference file. Let's just see what we have currently in TIGER. We'll go here to change attributes. This is

in the modifier feature tool, and you can see here that there is a difference between the two.

In our reference file, we have the zero at the end, and then in our current layer, we don't have the zero at the end, but if you want to update to our reference layer, just a reminder, our VTDST code, there's a six-character limit. If I want to match it, I need to delete the zero at the beginning, and then I'll add the zero at the end, and I'll click okay. We can see that change has taken place. Let me close out of my identify layer, and let me go back to my verification tool. I'll click refresh. This will implement the changes. Please disregard this zero features updated.

It refers to face changes within GUPS since we are updating a VTD geography saying zero changes. Now you can see after the refresh, our errors have been reduced greatly. Our list is much smaller now. That's a great start, and now I'll move onto our next type of error. Let's see what we have. I'll put it on, and I get the missing VTD error. In the case of this one, as I mentioned earlier, if you run the verification tool when you first start a VTD project, you should not see errors like this because every county is wall-to-wall coverage in TIGER.

You might see it if you work on the county and then run the verification tool. The instance, the criteria of view tool also picks up these kind of errors. I'm going to leave this one for that later portion of my demonstration. I'm going on to my next error. It's a missing VTD reference file error. So, you can see here reading the description that this face does not have a value in the reference VTD error. You can see that it's coded in blue.

This is an information only kind of error, but clicking through them will help you quickly see the faces that aren't covered by your reference VTD layer

classified in TIGER. We're just going to just look through to see what we have, and as I mentioned earlier, you've kind of erred through a curve at the edge of the county and a water body. You hear that this is a river bed at the edge of the county.

You do just want to look through those to make sure you don't see anything really odd. Looks like we're good. I'm going to ignore all after I've reviewed them this will help them not show up later on. I'll click refresh, save those changes. You can see some tutoring basic changes. You can see how many updates were done. The match looks good. I'll run the verification for it again.

So, now we'll move onto doing the criteria view tool since all of the errors have been resolved. The criteria view tool is right next to the verification tool. It's yellow instead of blue, and we see what errors we have. As I mentioned earlier, this is the—well, actually, let me go over the color code. Earlier, we only had blue errors which were pre-information only here. In the criteria view tool, we also have red errors. These are errors that must be fixed before you can export to us at the census.

So, we'll click on this. This is the hole that we looked at earlier. You can see in this case that this face should definitely belong in the VTD that's around it. It looks like six. We'll use this geography, this blue click arrow here just to select that VTD. Then we'll go at it using the yellow selection. To grab that, we'll click the addition pull. Now, it's added to our VTD, and if we click refresh, it'll be removed.

You do need to save every time you're on the criteria view tool, and now you can see our errors have been reduced down to one. One nice update that we have this year in VTDV is you can cycle through your non-contiguous areas

just to see the different parts using the arrows right here. So, let's see what's going on with this error.

You can see here that we do have a non-contiguous portion. What's interesting about this one, we can see just based off the labeling that it matches the reference layer and the current layer, so this saved face belongs in non-contiguous areas. We'll go onto the next one, and we can see that only is the current layer showing this as part of this. We know we need to fix that one, and if we zoom out, we see that there's also another face up here which also needs to be added to the VTD around it.

I'll make that correction. I'll click fix. The modifier feature tool is already open. I'll use the select by geography tools here just to select that surrounding VTD. I'll click select, and if you hold down shift, you can click multiple faces. I'll click this, too. I'll add them, and now we are good to go.

I'll close out of modifier feature tool. I'll go back. I'll refresh and save those again, and I'll ignore the remaining ones, hit refresh, and we are good to go. Now, we'll return to Jennie to discuss identifying slivers in VTDTV module.

Jennie Karalewich: Hello again. So, Matt did a great job demonstrating VTDTV tool, so now I want to kind of tie what I was presenting about earlier about slivers in your data and what you're going to see with the GUPS VTDTV tool. So, I'm going to look at my presentation, and I'm going to go over three sliver examples over these next few slides.

So, in this example here, you can see that my VTD verification tool found an instance where this triangular face with the red hatch mark does not match the correct VTD between the current VTD layer and the reference VTD layer. So, it doesn't match what the state submitted. It's different. So, per the

reference VTD layer, this triangle should be a part of Groveland 10 Voting District out of the pink line. However, we have it as a part of Groveland 1 voting district.

So, when we're resolving these, we ask that you immediately turn on your legal boundary? For this example, it is MCD, an incorporated place. You can see that when I turn on my incorporated place that the thicker orange line is the place boundary. The thicker gray line is the VTD reference layer boundary.

So, in this instance, you can see that we move the coverage of Groveland 1 Voting District to include that face, and this aligns the Groveland 1 Voting District and Groveland 10 Voting District boundaries will be incorporated place. We ask if you see slivers like this that you do not immediately match the reference layer meaning that we would use the thicker gray line as the boundary because that triangle face would be a sliver.

So, just to check I'm going to look at imagery and you can see that there's no population in that area because we didn't want to affect slivers that did have population. So, again, the VTD boundaries and the incorporated place boundaries are aligned. There's no slivers here, and we ask that you keep this representation.

So, as you're reviewing your data in VTDV, you'll see if there's been wide scale place boundary updates and VTD updates. You'll see how the VTD reference, the thicker gray line and the place boundaries will kind of mirror each other, so it's a good guide for what polygons that you're going to have, put polygons on faces if you should leave them as is or make any edits.

So, here's another example, and you can see that this face came up in the VTDV tool. It is currently in the Venetian Golf and River VTD, and the

participant submitted it as a part of the Auburn Woods & Sawgrass VTD. Also in this area, it's the median of interstate. We have I-75. So, what investigates this, I'm going to turn on my legal boundaries again. In this case, it's CCD and my place layer.

You want to zoom out to kind of assess the situation, and in this case, the faces in question, the VTD boundary was originally the northbound lane of I-75, but now it's the southbound lane of I-75, and you can see that it affects several median faces along the interstate. So, in this case, we adjust to the VTDs to match the southbound lane of I-75 because when you looked at it at a county level, there was a checkerboard pattern where the boundary was varied from the north to southbound lane.

So, we stretched them to make it consistent in the county. So, again, I go back to where the example was, taking a look at imagery just to be sure there's no population there and that we ask that again, this was a discrepancy between your reference layer in TIGER, but we ask that you don't change it and leave the current TIGER representation. So, in my last sliver example, we can't always be right every time, so I wanted to show you this example.

Again, the orange is the place boundary, and you can see the VTD boundary between the pink and the purple. In this case, a sliver got through. You can see that the area between the place boundary and the VTD boundaries, it wasn't adjusted. When you look at imagery, you can see that in the north portion of that sliver case, there is a housing unit, so we didn't want to touch that.

However, we ask you to review to determine if the place boundary and VTD boundary should align affecting that housing unit. So you would add the faces like Matt showed, and if the place of VTD should match each other, we ask

that you align them. I just thought I'd take a few minutes to kind of just bridge the gap between what I talked about earlier and using the VTDV tool. So, I think we're on for a question-and-answer portion again.

Coordinator: Thank you. Once again, if you'd like to ask a question from the phone lines, please press star [*], then 1, unmute your phone and record your name when prompted. If you need to withdraw your question, please press star [*], then 2. One moment, please while questions queue up. Our first question today comes from Jennifer Wheeler. Your line is now open.

Jennifer Wheeler: Thank you. Jennie, I have a question about the BAS, and I know that you had mentioned that we need to keep in mind what BAS changes were made, but my question is about what the BAS changes in the future. Since we also do the BAS every year, I'm aware of the changes that you guys will receive and probably accept because we have all the documentation. How are guys handling that? Do you do your updates after you get the BAS? Does that make sense?

Jennie Karalewich: No. Hi Jennifer. It totally makes sense. So, I'm just going to be specific for your example because I know it. So, Arkansas submitted BAS updates through the boundary and annexation survey, and you guys also submitted the VTD updates, so we knew during the process that VTD verifications, you know, this phase, that you guys would have to go through and resolve because we couldn't do the updates through currently.

So, for this phase that we ask that you review it and make the matches where appropriate. If more updates are submitted through BAS this year, we ask that you use the voting district verification two periods to realize them, as well, and then after that, we're not as concerned because we do not maintain the voting district boundaries past 2020.

Jennifer Wheeler: Okay. So, if I know you got... Go ahead. I'm sorry.

Jennie Karalewich: No, I was going to say does that help?

Jennifer Wheeler: Well, I just want to make sure I understand. If I know that, you know, I'll be setting the BAS soon, and you're going to get that at some point and process it probably after I submit the VTDs. I guess what I'm trying to say is I should go ahead and submit the change to the voting district because I know you're going to get it. I shouldn't wait until you have it.

James Whitehorne: Right. So, I mean, this is James. So, yes, just because of the time and way these programs work, the updates for the BAS and for the voting district project occur on the same cycle, so if you were going to wait to see in the data the BAS changes and then put in your voting district changes, you'd have to be ready for the next cycle, so we do try to coordinate with BAS team especially in a case like where you told us in advance that we should expect a bunch of BAS changes like you did last year for them to do their work first, and then we put ours in following, so just the line work is already in TIGER from the BAS changes that you've made.

Jennifer Wheeler: Okay.

James Whitehorne: The difficulty we've had in the past is with people trying to put in voting districts on an anticipated BAS edge without it being there. It becomes very difficult, but then you sometimes end up with mirrors and shadow edges, so it's going to take some coordination, but I think if you know of BAS changes, and you can alert us to them in advance, we can try to sort of organize things on our side so that things are sequenced properly to get the best result.

Jennifer Wheeler: Okay. I think that'll be the case again this year. Hopefully, this'll be the last year where we're playing catch up with a lot of the old annexations that have been missed over the years, so I'll coordinate with you guys on that.

James Whitehorne: Yes, just keep the communication going with us as far as what you know and where the changes will be, and we'll make sure we work with BAS and sequence everything that we can.

Jennifer Wheeler: Okay. Thank you.

Coordinator: We are currently showing no questions at this time.

James Whitehorne: Then we're going to go to the last part of the presentation here. We're going to have Mike Arthur demonstrate quickly how you submit the file when it's ready to come back to submission.

Michael Arthur: Thanks, James. Now that we've completed work on our file, it's time to save the file one more time before we start the submission process, so again, click on the save button. Okay. Next the user will click on the export to zip icon which is this yellow icon right here. We click on it. There are two options—export for census or share with another participant. The export for census selection will take all the changes that were made. It zips them up into a nice package.

To share with another participant selection, we'll take the whole project the user is working on and zip it up to pass it along to another colleague. So, today, we've completed our file, and we're ready to submit to census through the official state liaison. So, I'm going to click on the export for census button and then click the okay button. So, as I hit okay, I might've seen it just real quickly, the GUPS will check to see if the criteria review tool has been run.

If the criteria review tool has not been run, then the user will be prompted to run the tool before they export the file. So, a notification has popped up that the zip file was created, and it shows the location where this file is stored. So, I click on the yes button here just to take a look to see where it's been stored. If you notice here, it ends with underscore return, so I know this is the file that needs to be submitted to census.

If you had done a share with another participant, it would say data dictionary, and that's the file that you would send to a colleague, but today, we're focusing on we do want to make sure it says return because we're going to submit it to the Census Bureau. Next, I'm going to bring up the Secure Web Incoming Module. If you've been approved by your state to submit a file to census and do not have a swim token, please contact our office, and we'll provide you with a token to register your account.

For returning users, you will log in, and if you have forgotten your password, please use the forgot your password link, and it'll ask you to answer your security questions to reset your password. So, I'm going to go ahead and log into my account. From here, I can start a new upload. So, on this page, this is the program landing page, and you'll notice nine geographic programs that the Census Bureau collects data for, so I'm going to pull up a slide here. Just a minute.

So, we want to emphasize that the third option on this landing page, you want to click on redistricting data program, BBSP VTD button here. If you would click on another button and submit your file, it would not make it to our office, so we really want you to pay attention on this page here to make sure that you're selecting the correct button.

Now that we've selected the correct button, and I click the next button, our state is Louisiana that we worked on today. I'll click on the next button, and then from here, you'll click the add button to add your file. Now, it's okay to add multiple counties, multiple files in here and submit it to us, but we ask that you do not zip all these counties up into one file because it will have issues when it's submitted to us.

From here, I'm not going to demonstrate it. You'll click the next button, and then we will get a notification on our end that the file has been submitted. So, at this time, we'd like to pause, and we would like to do our final question-and-answer session.

Coordinator: Thank you. Once again, if you'd like to ask a question from the phone lines, please press star [*], then 1, unmute your phone and record your name when prompted. If you need to withdraw your question, please press star [*], then 2. Once again, to ask a question from the phone lines, please press star [*], then 1 and record your name when prompted. One moment, please, while questions queue up. Once again, if you would like to ask a question on today's conference, please press star [*], then 1 and record your name when prompted. One moment, please, while questions queue up. We are showing no questions at this time.

James Whitehorne: Thank you Operator. So, in closing here today, I want to say something that's often sort of a cliché, but what really will make this successful for you and for us is if you continue to communicate with us the challenges that you encounter as you're doing the work or you encounter things that you see that you don't understand why they are or you have difficulty sort of keeping in line with what we've outlined today.

We're all geographers in this office, and we all understand that geography is sort of the art of exceptions, and we're trying to deal with all those exceptions in what is a requirement as to be in a standardized world, so if you just continue to talk to us, I think there were examples of that today during the questions we had the phone.

We are going to work with you as best we can to try to accommodate everything we can, but we do want to make sure that we end up with a quality product at the end for both the Census Bureau and for you. A couple of things I wanted to mention, you know, we're talking about this sort of reduced ability to participate in the second round of verification, the one that's going to happen next year.

As Jennie actually answered the question already, that doesn't constrain you from adding new lines or new features that you need if they're relevant to your voting district, so I want to make sure that that was clear. Also, if you encounter a situation like you have islands out in a large water body, and there aren't existing edges, you can draw new edges to slice up that water body to be able to add them to the correct voting district that you need.

Then, we do want to make sure that you pay attention when you're comparing a reference file to what we have in TIGER for those small no population slivers that Jennie was sort of outlining when she was going through her part of the presentation, and try not to undo them unless they necessarily have to be undone. It's really a positional issue and not really a criteria that your voting district be moved. Try to be cognizant of that when you're making your decisions about what needs to be changed.

Finally, I want to give one last plug for the prototype block that we had for the block boundary suggestion project that you'll see in your data set this time

around, and this is the last time that we'll making those before we actually create 2020 blocks.

The ones you saw last year were clouded by the fact that we put the 2010 voting districts back into the census geography, but that's been stripped out either by you providing new 2020 voting districts or if we didn't receive voting districts from you last time, we just removed them, so the only thing you'll see is block on the geography that we can plan to move forward with the exception of those changes that'll come from future 2020 programs, but they're a fairly good indication of what your blocks will look like in 2020 if there are no changes, so it's a good time now if you've known of any issues in the past to make sure that they are remedied through the suggestions provided to us previously.

So, with that, I just want to thank you for all your time and your questions. We're always available for assistance. You can reach us at 301-763-4039 or at rdo@census.gov. Those are the group lines, so they'll always make sure someone's here to help you. We look forward to making this a success for everyone and for delivering you the data that you need in 2021. Thank you all very much and have a good afternoon.

Coordinator: That concludes today's conference. Thank you for your participation. You may disconnect at this time.

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