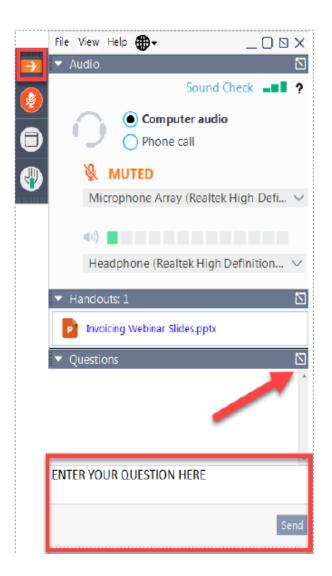


DISCLAIMER

To accommodate all attendees, real-time closed captions will be present during this presentation. This is a new feature we are testing out to improve webinar accessibility for all. We understand it is a significant change and appreciate your patience. We apologize in advance for any transcription errors or distractions. Thank you for your support.

Housekeeping

- Audio is available through your computer's speakers.
- The audience will remain on mute throughout the presentation.
- Enter questions at any time using the "Questions" box.
- If your audio or slides freeze, restart the webinar.
- A copy of the slide deck is in the "Handouts" section of webinar panel.



Today's Speakers

John Putman

Communications Specialist | High Cost

Tim Weith

Director of Product and Program Management | High Cost

High Cost and the Connect America Fund (CAF)

The High Cost program ensures universal availability of essential telecommunications services in rural America.

Legacy Voice Funds

- Subsidize voice service to provide universal access to basic phone service
- Calculate support based on carrier costs
- Provide support to traditional rural telephone companies
- Are subject to USAC audit process

Modernized Broadband Funds (Connect America Fund)

- Subsidize broadband to support advanced communications networks and high-speed Internet access
- Rely on forward-looking cost models and competitive bidding to give carriers a set amount of support to deploy broadband at certain speeds over a clear timeline—with interim and final deployment milestone deadlines—to a defined number of locations in rural communities
- Provide support to not only traditional rural phone companies, but also rural electric cooperatives, cable operators, wireless operators, wireless Internet service providers and satellite providers
- Are subject to compliance framework to ensure required deployment

Connect America Fund Compliance

USAC closely monitors carrier compliance with broadband deployment obligations to ensure that carriers are using CAF support to build out high-speed Internet access that meets minimum speed and latency standards to required location counts by relevant deployment milestone deadlines in rural areas eligible for funding.

Compliance process consists of three steps:

HUBB Portal: Tracking Broadband Deployment

Verification Reviews: Confirming Broadband Deployment

Network Performance Testing: Measuring Speed and Latency

This compliance framework safeguards Connect America Fund accountability, transparency and integrity.

HUBB Portal: Tracking Broadband Deployment

- Carriers participating in modernized funds with defined fixed broadband build-out obligations requiring them to
 provide voice and broadband service to a specific number of fixed locations in areas eligible for support must file
 deployment data annually with the High Cost Universal Broadband (HUBB) portal
- HUBB collects the geographic coordinates (latitude and longitude) of locations where carriers are deploying broadband using CAF support, the broadband speeds available at those locations (speed tier) and deployment dates
- HUBB performs automated, real-time <u>validation</u> of data submissions and only accepts locations that pass all validations checks:
 - Checks that lat/long of a reported location fall within area eligible for funding
 - Checks that the location is not a duplicate of one already submitted
 - Checks that date of deployment falls within fund timeline
- HUBB tracks carrier progress toward meeting interim and final deployment milestones. Carriers with annual milestones must also complete separate milestone certifications in HUBB
- Annual HUBB filing deadline is March 1 for carriers to report broadband deployed with CAF support in the prior calendar year or certify "no locations to upload"

Verification Reviews: Confirming Broadband Deployment

All carriers participating in CAF programs with defined broadband build-out obligations are subject to verification reviews to confirm deployment to a random sample of locations reported in the HUBB. Verification reviews fall into three main categories:

- Reviews tied to deployment milestones that begin after annual March 1 HUBB filing deadline
 - Original and Revised ACAM, ACAM II and CAF II Auction carriers had mandatory deployment milestones at the end of 2022 and may face verification reviews in 2023
- Verification reviews conducted at the request of carriers that complete deployment ahead of required milestones and are seeking to reduce their Letters of Credit (LOC) values
 - RDOF carriers can take advantage of an optional deployment milestone by the end of the second year of the program to reduce LOC values
- Verification reviews conducted as part of the Rural Broadband Accountability Plan (RBAP), a new FCC initiative to expand oversight of carrier compliance with CAF obligations, ensure public funds are properly invested and enhance program transparency
 - These reviews can occur before deployment milestones

Carriers may also be subject to site visit audits following final deployment milestones

Verification Reviews: Confirming Broadband Deployment

- The goal of the verification review process is to confirm that a carrier deployed broadband service meeting the FCC's performance standards to a qualifying number of locations by the relevant deployment milestone deadline. For each location selected for review, USAC seeks to confirm that:
 - The structure at the reported location is eligible for CAF support
 - The reported service address accurately corresponds with the reported lat/long coordinates
 - The upload and download speeds available are at or above the speeds the carrier must deliver
 - The carrier deployed service at the required speeds in time to meet the deployment milestone
 - The actual number of units or dwellings at the location accurately ties back to the reported number of units or dwellings for the location record
- Carriers will be asked to supply documentation that can serve as evidence of deployment to all locations selected for verification review
 - Examples of acceptable documentation include: customer bills, screen shots from service availability and provisioning tools, letters of certification by outside engineers

Network Performance Testing: Measuring Speed and Latency

- Performance Measures testing framework ensures that CAF-supported broadband service meets basic speed and latency standards
- Carriers must conduct one week of speed and latency testing in each quarter of calendar year at a USAC-selected random sample of CAF-supported locations reported in the HUBB that have active subscribers, and submit and certify all test results with USAC
 - During official testing, carriers have until the following July 1 to submit and certify results from quarterly testing conducted during the prior calendar year
- At least 80 percent of speed measurements must be at 80 percent of required speeds and 95 percent of low-latency measurements must fall at or below 100 milliseconds round-trip time
- FCC will consider failure to meet speed and latency requirements as a failure to deploy and may withhold support
- Before official testing begins carriers are subject to a year of quarterly "pre-testing" at the USAC-selected random sample of CAF-supported locations with active subscribers
 - During pre-testing, carriers must submit and certify results from quarterly testing within one week of the end of the quarter
 - Carriers will not face withholding of support for failing to meet speed and latency standards during pre-testing

Connect America Fund Broadband Map

HUBB Portal: Filing Obligations by Fund

Carriers in these funds have until March 1, 2023, to file data for locations deployed in 2022 or certify "no locations to upload":

- Alternative Connect America Cost Model (A-CAM)
- Revised ACAM
- ACAM II
- Connect America Fund-Broadband Loop Support (CAF BLS)
- Rural Broadband Experiments (RBE)
- Alaska Plan (other than carriers with individualized performance plans that only require them to maintain service at existing levels)
- Connect America Fund (CAF) Phase II Auction (CAF II Auction)
- Rural Digital Opportunity Fund (RDOF) (except for RDOF carriers authorized for support by the FCC in DA 23-33 on Jan. 13, 2023)
- Bringing Puerto Rico Together (Uniendo a Puerto Rico) and the Connect USVI Fund (PR/USVI)
 - Carriers receiving PR/USVI Stage 2 fixed support

HUBB Portal: Filing Obligations by Fund

- CAF BLS carriers are subject to HUBB reporting obligations
 - This includes CAF BLS carriers that were exempt from filing in the HUBB in the past because they had already built out 10/1 Mbps broadband to at least 80 percent of their study area
 - The HUBB does not accept any locations deployed before May 25, 2016
 - CAF BLS carriers that were fully deployed to all locations in their study area with 25/3 Mbps broadband before that date, or become fully deployed, have satisfied their buildout obligation
 - USAC and the FCC will develop a process for these carriers to certify to full deployment
- **Alaska Plan** carriers with individualized performance plans requiring them only to maintain service at existing levels do not have defined deployment obligations and do not have to file in the HUBB
 - USAC encourages these carriers to certify annually that they did not deploy any new locations during the previous year
 - If these carriers do deploy new locations or upgrade service to existing locations at any speed, they should report those locations in the HUBB
- **RDOF** carriers must submit any locations deployed since July 1, 2019
 - RDOF carriers authorized for support in DA 23-33 do not have to file with the HUBB this year

HUBB Portal: Tracking Broadband Deployment

- Accurate geolocation data is the key to filing successfully with the HUBB
 - See the USAC <u>Geolocations Methods Guide</u> for an overview of different methods for collecting accurate latitude and longitude coordinates
- Carriers that did not deploy any locations in 2022 must still log into the HUBB and certify "no locations to upload" by March 1, 2023
- Carriers with 2022 deployment milestones must also complete a <u>separate milestone certification</u> as part of the annual HUBB filing
 - New this year: This includes separate milestone certifications for separate deployment obligations by speed tier
 - Carriers may face verification reviews of their 2022 milestones following the March 1, 2023, filing deadline to confirm deployment to a random sample of reported locations
 - Carriers found to have missed deployment milestones face increased reporting obligations and potential withholding/recovery of support
 - Carriers that missed a deployment milestone were required to inform the FCC, USAC and relevant state and Tribal governments within 10 days of the milestone deadline

HUBB Portal: Deployment Milestones by Fund

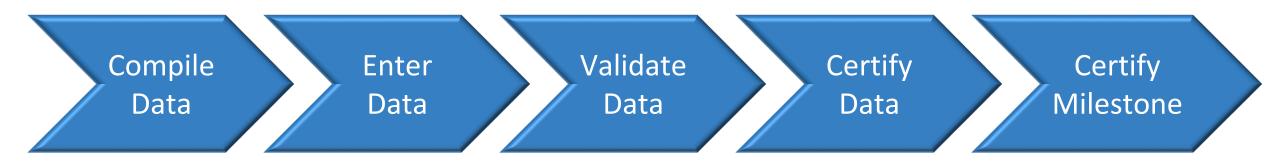
2022 Deployment Milestones

- Original ACAM carriers face a 60 percent milestone for deploying 10/1 Mbps broadband as of the end of 2022
- **Revised ACAM** carriers face a 60 percent milestone for deploying 10/1 Mbps broadband <u>and</u> a 40 percent milestone for deploying 25/3 Mbps broadband, both as of the end of 2022
- **ACAM II** carriers face their first milestone, for deploying 25/3 Mbps broadband to 40 percent of required location counts as of the end of 2022, and must meet similar deployment obligations on Tribal lands
- **CAF II Auction** carriers face their first mandatory milestone, for 40 percent of required deployments as of the end of 2022
- **RDOF** carriers can take advantage of an optional 20 percent milestone to reduce Letter of Credit (LOC) obligations

Other Deployment Milestones:

- CAF BLS carriers face one final milestone (for deploying 25/3 Mbps broadband service) as of the end of 2023
- RBE carriers face rolling deployment milestones
- Alaska Plan carriers faced five-year milestone as of the end of 2021

HUBB Data Filing Process



Use templates to compile location data, using Geolocation best practices

Upload template with location data to the HUBB

Location data validated by HUBB – address any errors or warnings

Certifying Officer certifies location data in the HUBB

Certifying Officer certifies milestone in the HUBB (if applicable)

HUBB Data Fields

Field Name	Description	Example / Notes
Study Area Code (SAC) *	6-digit study area code	579999
Latitude *	Latitude of the location	6 decimal places = (35.509220)
Longitude *	Longitude of the location	6 decimal places = (-98.433700)
Date of Deployment *	Date the carrier made service available	08/04/2022
Download / Upload Speed Tier *	ID representing the speed available	4 = (25mbps / 3mbps)
Address *	Location Street Number and Name	700 12 th Street
City *	Location City Name	Washington
State *	2-Letter State Abbreviation	DC
ZIP Code *	Location Zip Code	20005
# of Units *	Number of units at location	2
HUBB Location ID	ID Assigned by System	12345
Carrier Location ID	ID Assigned by the Carrier	12345
Technology ID #	Technology Type ID	Required for CAF II Auction, RDOF
Other Technology	Description of Other Technology	Text Description
Latency ID #	High or Low	Required for CAF II Auction, RDOF, Alaska

^{*} Required Field; # Required for Specific Funds

HUBB New Locations CSV Template

Fields with an Asterisk (*) are Required

Latency	Fie	ld
_		

- Required for CAF 2 Auction and Alaska Plan
- Optional for other programs
- Values
 - 1 High Latency
 - 2 Low Latency

	A	В	С	D	E	F	G	Н	I	J	K	L	M	N
1 Stu	udy Area Code*	Latitude*	Longitude*	Date of Deployment*	Download/Upload Speed Tier*	Address*	City*	State*	Zip Code*	# of Units*	Carrier Location ID	Technology	Other Technology	Latency
2														
3														
4														
5														

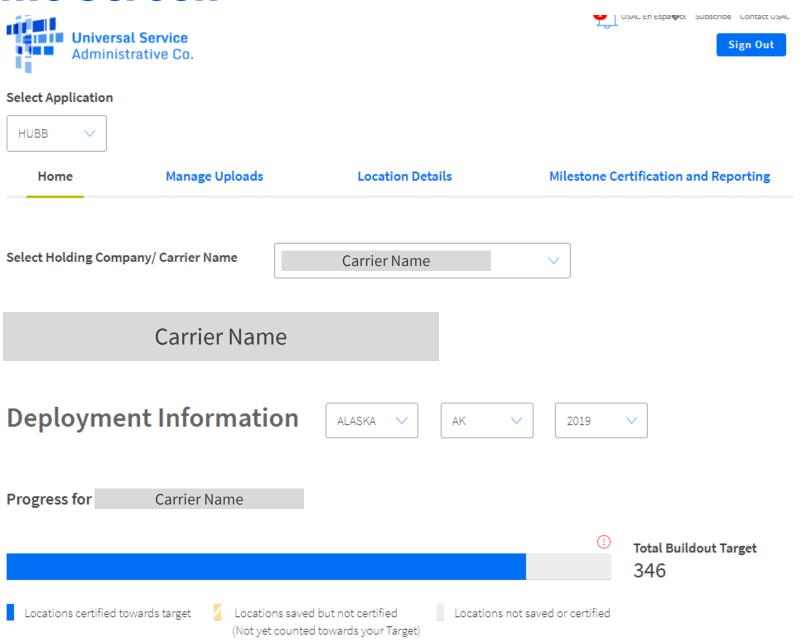
Technology Field

- Required for CAF 2 Auction
- Optional for other programs
- Values
 - 1 DSL
 - 2 Cable
 - 3 Fiber
 - 4 Wireless
 - 5 Low Earth Orbit Satellite
 - 6 Geostationary Satellite
 - 7 Other Technology (Description Required)

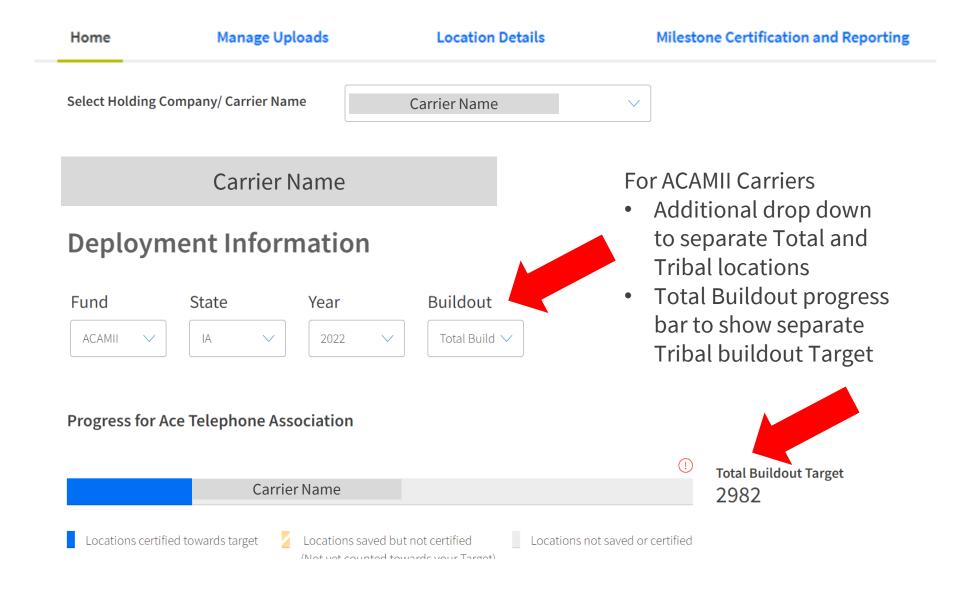
Other Technology Field

Description of Technology

HUBB Home Screen



HUBB Home Screen



Home

Manage Uploads

Location Details

Milestone Certification and Reporting

Manage Uploads

Upload Location File

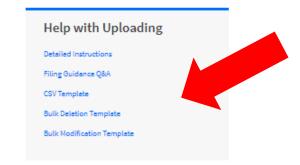
Use the form entitled CSV Template to upload data. For more information on how to use these and how to format your data, click on Detailed Instructions and Filing Guidance Q&A. For bulk deleting data from previously uploaded file, use the form entitled Bulk Deletion Template. For bulk updating data from previously uploaded file, use the form entitled Bulk Modification Template.

The "deployment year" is derived by the system from the deployment date provided in each qualifying uploaded record that should be reported to USAC. The year associated with the deployment date is used as the "deployment year".

The HUBB permits carriers to file records for multiple deployment years at once.

Timeliness is based on the due date for the deployment year associated with each record.

That is, if records are filed prior to the deployment year due date, they are considered ontime. If records are filed after the deployment year due date, they are considered late. For example, on March 15, 2018, a CAF-BLS recipient files some records for the 2017 deployment year (report due March 1, 2018) and some records for the 2018 deployment year (report due March 1, 2019). The records associated with the 2017 deployment year are considered late as they were filed after the 2017 deployment year are considered on-time as they were filed before the 2018 deployment year due date (March 1, 2019).



Resources

- Detailed Instructions Available
- Filing FAQ
- New Locations Template
- Bulk Deletion Template
- Bulk Modifications Template

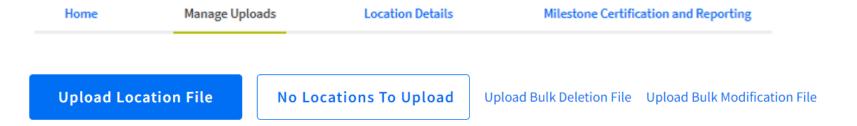
Actions

- Upload New Locations File
- No Locations To Upload
- Upload Bulk Deletion File
- Upload Bulk Modifications File



No Locations To Upload

Upload Bulk Deletion File Upload Bulk Modification File



Recently Uploaded Files

File Name File Type		Uploaded	Progress	Records Uploaded	Data Errors & Warnings	Data Details
CAFII_15R_2022_error.csv	New Locations	Jan 12, 2022 9:25:54 AM	Complete	15	15 0	Review Data
CAFII_15R_2021.csv	New Locations	Jan 12, 2022 9:21:22 AM	Complete	15	0 0	Review Data
Show 10 V files/page					< 1	> of 1 page

- View Status of New Locations Uploads
- View Status of Bulk Modifications and Deletions
- Review Data for New Locations and Modified Locations

Home

Manage Uploads

Location Details

Milestone Certification and Reporting

File Upload Details

Summary

These are the validation results for **CAFII_15R_2021.csv**. To fix errors or warnings, you can either delete all the locations and upload a new file, or edit each data entry individually using the table below.

- Locations with **one or more errors** cannot be saved into the system.
- Locations with **one or more warnings** can be saved into the system.

Note: The system does not display all errors for locations in the table below. To view the errors/warning codes, select the "Edit" icon in the table or the link "Download Data Errors and Warnings" below.





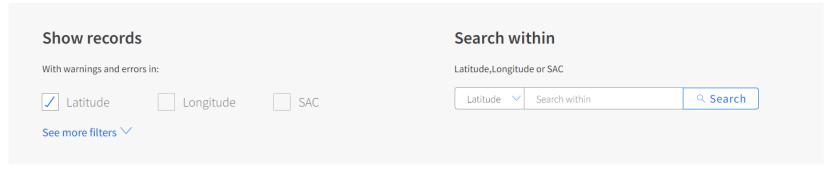




- If all locations pass validations and no errors or warnings are displayed
- Then you can Save the locations uploaded into the HUBB

Home Manage Uploads Location Details Milestone Certification and Reporting

Records With Issues





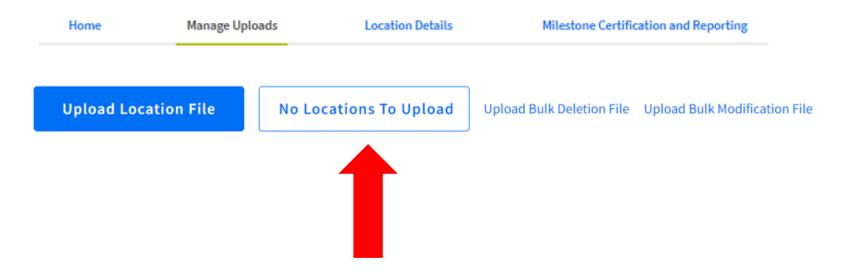
Date of Deployment Edit SAC Latitude Longitude **Speed Tier** State No. of Locations 255181 -85.6277064 1/1/2021 3 VA 4667 255181 -85.6514743 1/2/2021 4 VA 4667 5 255181 -85.6250011 1/3/2021 VA 4667 6 VA 4667 255181 -85.6121512 1/4/2021

For locations that fail Validations, you can:

Displaying 10 of 15 records

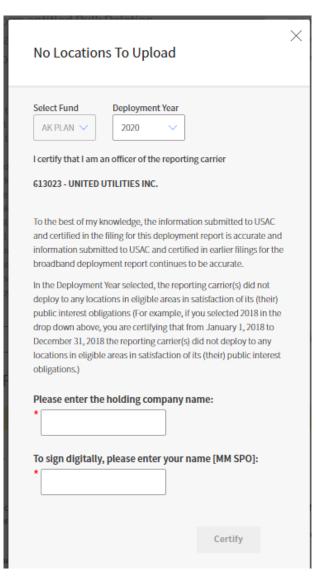
- Download the file
- Fix any errors using the single line edit tool
- Save the corrected locations into the HUBB

HUBB No Locations To Upload



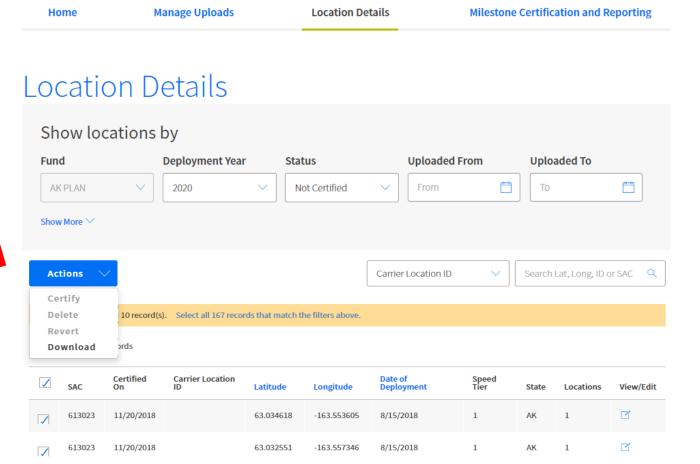
If you have no locations to report for the current filing period, select No Locations To Upload

- Provide your Holding Company Name
- Provide your Certifying Officer Name



HUBB Location Details Screen

11/20/2018



63.032441

-163.555522

8/15/2018

Actions

B

- Certify Locations
- Delete Locations
- Revert Prior Certification
- Download Locations for Bulk Modifications and Deletions

HUBB Milestone Certification and Reporting Screen able for Public Use

Home Manage Uploads Location Details Milestone Certification and Reporting

Milestone Certification and Reporting



Fields may automatically populate based on your uploaded file. You may edit your fields at any time.

In the table below, select a deployment year by clicking a radio button in the Select column. Click the Actions dropdown button above the table to select an action for the milestone related to the selected deployment year: View Speed Tier Report, Certify, View History.

Disclaimer: This report provides feedback as data is added or removed from the HUBB. The information contained within this report is intended for informational purposes only to assist in compliance efforts and does not constitute a final determination of your compliance with the required performance obligations.



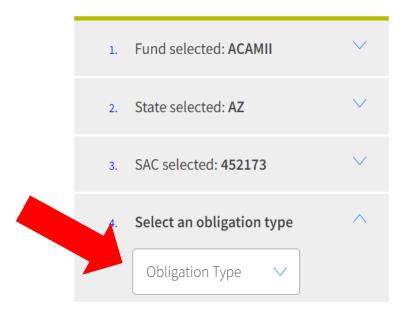
Build-out requirement (locations): 4469

Acti	ions 🗸								
Speed Tier Report Certify View History		Ready For Certification	Certified	Cumulative Certified	% of Certified Locations	Milestone Obligation %	Milestone on Target?	Certified On	Milestone Certification Status
0	2016	0	1518	1518	-		-	-	-

HUBB Milestone Certification and Reporting Screen Screen Public Use

Home Manage Uploads Location Details Milestone Certification and Reporting

Milestone Certification and Reporting



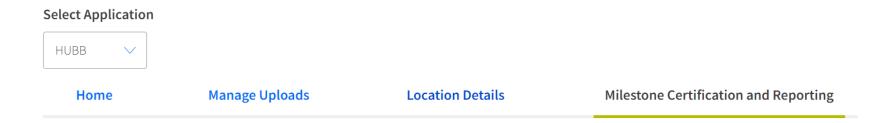
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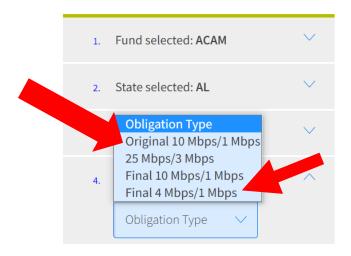
New 4th Drop down option

- All carriers can now complete their Milestone certification in the HUBB based on Fund, State, SAC and <u>Speed Tier</u>
- Milestone certification is now available based on meeting obligation totals by Speed Tier.

HUBB Milestone Certification and Reporting Screen able for Public Use



Milestone Certification and Reporting



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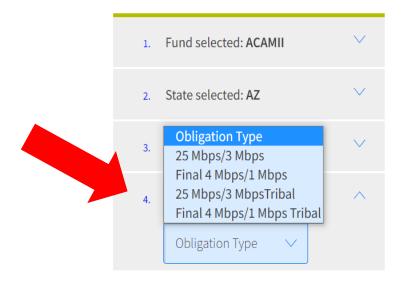
New Obligation type for ACAM, ACAMII, CAFII AUC, AK Plan & CAF BLS

- All carriers can now complete their Interim Milestone certification based on Fund, State, SAC and Speed tier
- All carriers can eventually complete their Final Milestone certification by Speed tier

HUBB Milestone Certification and Reporting Screen able for Public Use

Home Manage Uploads Location Details Milestone Certification and Reporting

Milestone Certification and Reporting



Fields may automatically populate based on your uploaded file. You may edit your fields at any time.

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New 4th Drop Down Option

- Speed Tier Obligation
- Tribal Obligation
- For ACAM II fund, now includes Interim and Final Milestone certification separately for Total obligations and Tribal obligations by Speed Tier.

Milestone Certification

	Home Certify View History		Manage Uploads			Location Details			Milestone Certification and Reporting			
>			Ready For Cur Certification Certified Cer		Cumulative Certified	% of Certified Locations	Milestone Obligation %	Milestone on Target?	Certified On	Milestone Certification Status		
	0	2016	0	1518	1518	-		-	-	-		
		2017	0	703	2221	-		-	-	-		
		2018	0	699	2920	-		-				
	\bigcirc	2019	0	194	3114	-		-	-	-		
	0	2020	0	365	3479	77.85%	40%	Yes	02/17/2021	Certified		
	\bigcirc	2021	0	0	3479	77.85%	50%	Yes	-	Ready		
	•	2022	0	0	3479	77.85%	60%	Yes	-	Ready		

HUBB Portal: Tracking Broadband Deployment

For more information about filing in the HUBB,

please visit the HUBB resources webpage:

https://www.usac.org/high-cost/annual-requirements/submit-data-in-the-hubb/

Resources include:

HUBB <u>FAQs</u>

USAC <u>Guide</u> to Geolocation Practices

FCC **Guidance** on Location Reporting

HUBB User Guide and Data Formatting Instructions

Templates for data uploads, bulk deletions and bulk modifications

HUBB webinar <u>recording</u>

HUBB webinar <u>presentation</u>

Verification Reviews: Confirming Broadband Deployment

For more information about the verification review process,

please visit the verification resources webpage:

https://www.usac.org/high-cost/resources/fund-verification-reviews/

Resources include:

Verification webinar <u>recording</u> (for ACAM carriers)

Verification webinar <u>presentation</u> (for ACAM carriers)

Verification review schedule (by fund)

Examples of the types of documentation that carriers can supply to prove deployment

Network Performance Testing: Measuring Speed and Latency

For more information about performance measures testing,

please visit the performance measures resources webpage:

https://www.usac.org/high-cost/annual-requirements/performance-measures-testing/

Resources include:

Performance Measures testing schedule (by fund)

FCC information about the performance measures testing program

<u>Charts</u> showing acceptable test paths and remote server locations

List of <u>vendors</u> that are helping carriers with speed and latency testing

Quick tips guide to the PMM

Performance measures testing webinar <u>recording</u>

Performance measures testing webinar <u>presentation</u>

An <u>explanation</u> of PMM compliance calculations

Questions?

