# Performance Measures Module:
## User Guide

Covers Subscriber Upload, Performance Data Upload and Compliance Report

Universal Service Administrative Co.

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## General Information and System Requirements

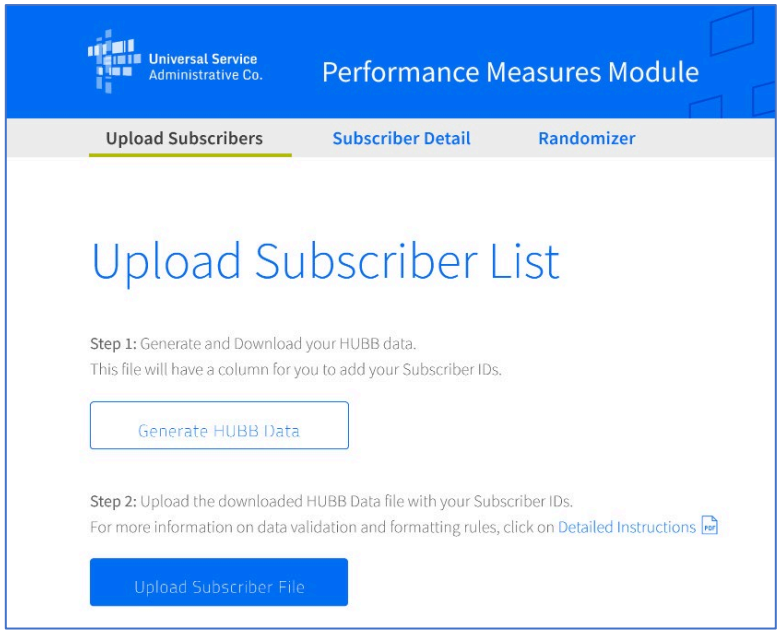
| Requirement | Description |
|---|---|
| Internet Browsers and Versions Supported | • Internet Explorer version 11<br>• Safari version 10 and above<br>• Edge version 14 and above<br>• Chrome version 51 and above<br>• Firefox version 46 and above |
| User Access | Carrier GCs and SPOs will be granted access to this system through our e-file system. Additional user access will be granted by the GC or SPO of the company. |
| Concurrent Accounts | Each organization will be permitted to have an unlimited number of users. However, after six months of no usage, an unused user account will be deactivated. |
| Session Timeout | Sessions will timeout after 30 minutes of inactivity. You will receive a warning modal 5 minutes prior to the expiration of your session. |

## Portal Home Page

The initial landing point for the system is the **Upload Subscribers** page. The Portal Home Page initially has navigation links to three sections of the USAC Performance Measures Module (PMM): **Upload Subscribers, Subscriber Detail** and **Randomizer**. You may switch between these three sections by clicking on either of the links in the navigation header.

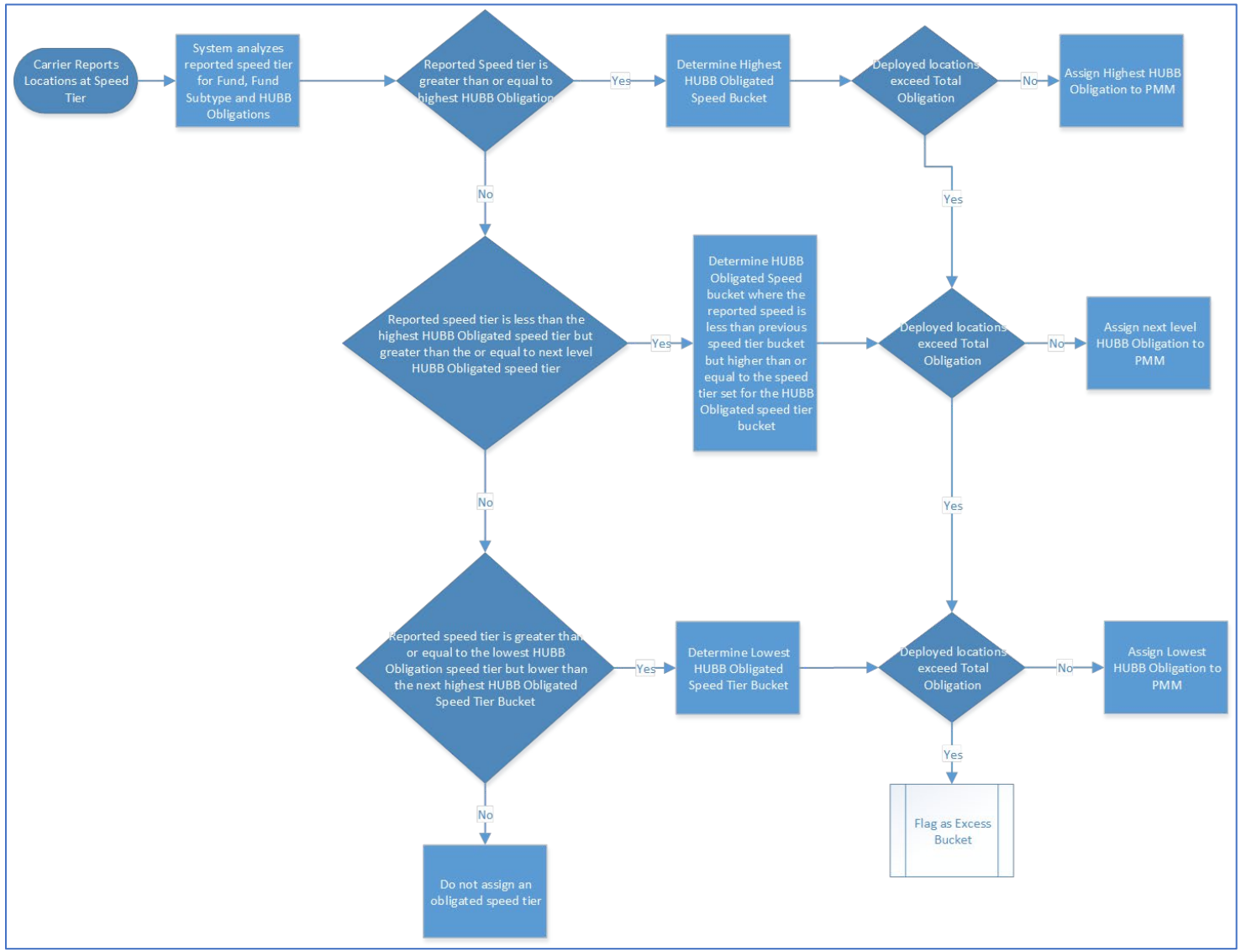
## Downloading & Re-uploading Data

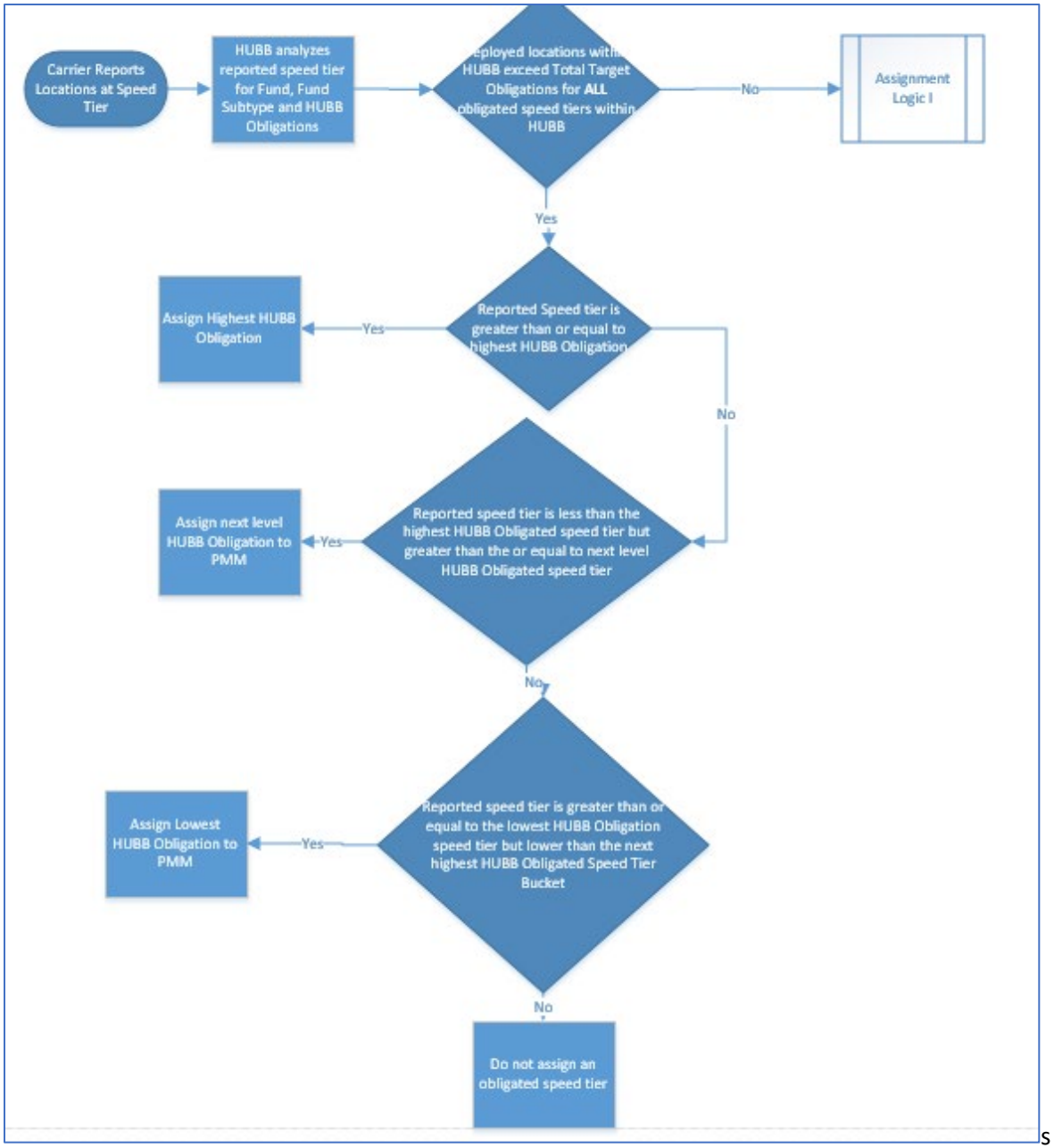
The **Upload Subscribers** page allows you to generate your HUBB data and upload your subscriber file. Only carriers who have entered certified broadband location data into the HUBB portal against speed tier obligations can generate and download a valid template file. The **'Speed Tier(s) will be based on the Program Fund's Final 'Obligated Speed Tier authorizations for each Study Area Code (SAC).**




| Fund | Speed Tier(s) |
|---|---|
| CAF II | 10/1 Mbps |
| ACAM | 4/1 Mbps, 10/1 Mbps, 25/3 Mbps |
| Alaska | Based on Authorizations (Varies) |
| RBE | Based on Authorizations (10/1 Mbps or 25/5 Mbps) |
| ACAM II | 4/1 Mbps, 25/3 Mbps |
| CAF II AUCTION | Based on Authorizations (10/1 Mbps, 25/3 Mbps, 100/20 Mbps, 1000/500 Mbps) |
| CAF BLS | 25/3 Mbps |

***The assigned PMM obligated speed tier may differ from the reported speed tier*** **uploaded into HUBB.** The PMM assigned obligated speed tier utilizes cascading logic for multiple speed tiers within a SAC based on the final obligated speed tier authorizations, at the time of certification within the HUBB.



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## Speed Tier Tables

### Speed Tier Table for All Funds Except Alaska

| Speed Tier ID | Download Speed | Upload Speed (Meets or Exceeds) |
|---|---|---|
| 1 | 1 Mbps | 256 kbps |
| 2 | 4 Mbps | 1 Mbps |
| 3 | 10 Mbps | 1 Mbps |
| 4 | 25 Mbps | 3 Mbps |
| 5 | 25 Mbps | 5 Mbps |
| 6 | 50 Mbps | 5 Mbps |
| 7 | 100 Mbps | 20 Mbps |
| 8 | 100 Mbps | 25 Mbps |
| 9 | 1 Gbps | 500 Mbps |

### Speed Tier Table for Alaska

| HUBB Alaska Speed Tier | download | upload | PMM Alaska Speed Tier | download | upload |
|---|---|---|---|---|---|
| 1 | 1 Mbps | 256 Kbps | 1 | 1 Mbps | 256 Kbps |
| 2 | 4 Mbps | 1 Mbps | 2 | 4 Mbps | 1 Mbps |
| 3 | 6 Mbps | 1 Mbps | 3 | 6 Mbps | 1 Mbps |
| 4 | 10 Mbps | 1 Mbps | 4 | 10 Mbps | 1 Mbps |
| 5 | 10 Mbps | 1 Mbps | 4 | 10 Mbps | 1 Mbps |
| 6 | 25 Mbps | 3 Mbps | 5 | 25 Mbps | 3 Mbps |
| 7 | 25 Mbps | 3 Mbps | 5 | 25 Mbps | 3 Mbps |
| 8 | 50 Mbps | 5 Mbps | 6 | 50 Mbps | 5 Mbps |
| 9 | 100 Mbps | 5 Mbps | 7 | 100 Mbps | 5 Mbps |
| 10 | 1 Gbps | 500 Mbps | 9 | 1 Gbps | 500 Mbps |
| 11 | 4 Mbps | 1 Mbps | 2 | 4 Mbps | 1 Mbps |
| 12 | 4 Mbps | 1 Mbps | 2 | 4 Mbps | 1 Mbps |
| 13 | 4 Mbps | 1 Mbps | 2 | 4 Mbps | 1 Mbps |
| 14 | 6 Mbps | 1 Mbps | 3 | 6 Mbps | 1 Mbps |
| 15 | 6 Mbps | 1 Mbps | 3 | 6 Mbps | 1 Mbps |
| 16 | 6 Mbps | 1 Mbps | 3 | 6 Mbps | 1 Mbps |
| 17 | 10 Mbps | 1 Mbps | 4 | 10 Mbps | 1 Mbps |
| 18 | 10 Mbps | 1 Mbps | 4 | 10 Mbps | 1 Mbps |
| 19 | 25 Mbps | 3 Mbps | 5 | 25 Mbps | 3 Mbps |
| 20 | 25 Mbps | 3 Mbps | 5 | 25 Mbps | 3 Mbps |
| 21 | 1 Gbps | 100 Mbps | 8 | 1 Gbps | 100 Mbps |

## Assigning Subscriber Identifying Numbers

The HUBB generated file will have all your HUBB data, meeting obligated speed tier requirements, with an additional column, "Subscriber ID". Please fill in your subscriber IDs (separated by a semi-colon, if you have more than one subscriber for the listed HUBB Location ID) for all subscribers associated with each location. This information must be included prior to re-uploading this file into the system. The HUBB Location ID and Subscriber ID are the only required fields for uploading subscriber data into the PMM system. The remaining fields are provided as a reference.

HUBB does not contain personally identifiable information (PII). For this reason, when assigning SINs, carriers **should not use their subscriber's PII**, including for example:

1. Name
2. Phone number
3. Social Security Number
4. Tribal ID Number
5. Carrier customer ID
6. Driver's license number
7. Medicaid/Medicare/SNAP numbers or other similar numbers
8. Geolocation coordinates (Latitude/longitude)

Carriers will retain the underlying data matching to the SINs. This data will not be shared with USAC or the FCC except as maybe ordered in specific circumstances (*i.e.*, audits).

## Steps to Download & Re-upload Data

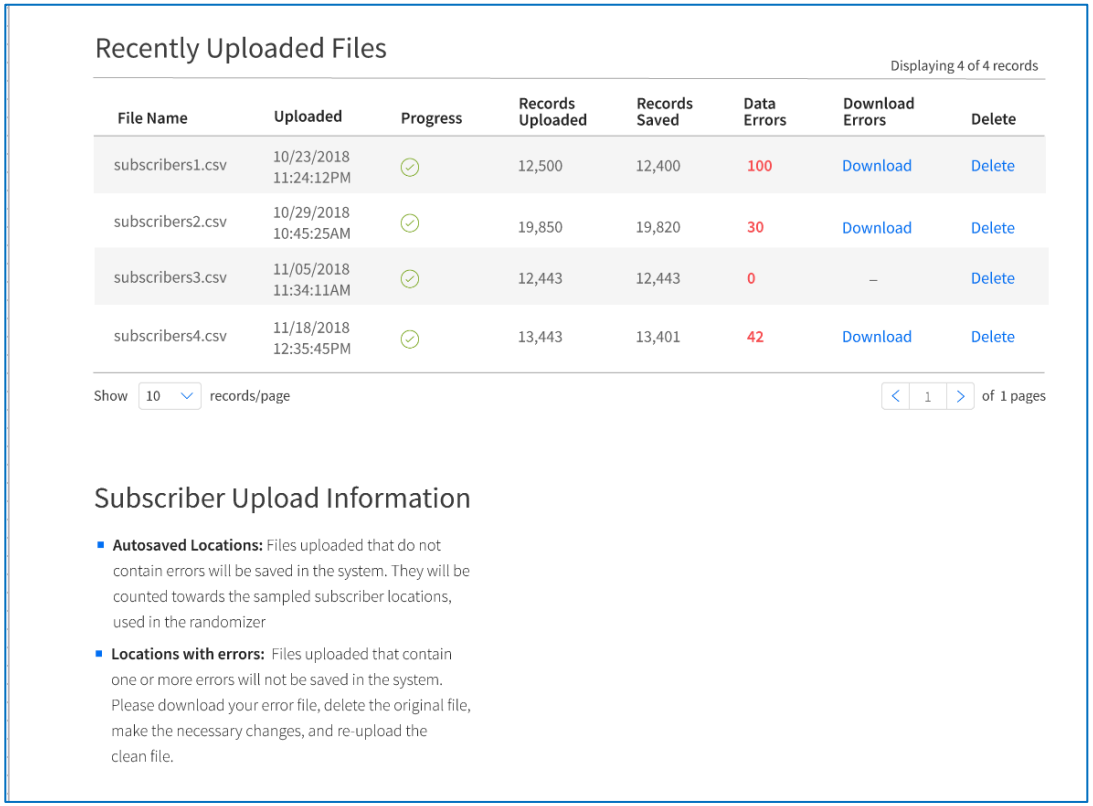
1. Click on the "Generate HUBB data" button. All your Certified HUBB data will be included in one file. Once a file download is complete, you may retrieve the file from wherever your computer automatically downloads files.
2. Fill out the "Subscriber ID" column in the downloaded .csv file. **If you do not have a subscriber at a HUBB location you should delete that row from your data file.** If you leave the 'Subscriber ID' field blank you will receive a warning in your data log file for that HUBB location.
3. Click on the "Upload Subscriber File" button

## Files Uploaded

Further down on the **Upload Subscribers** page is the "Recently Uploaded Files" table. In this table, you will find all the files that you have uploaded for validation. Within this table, you will have the ability to:

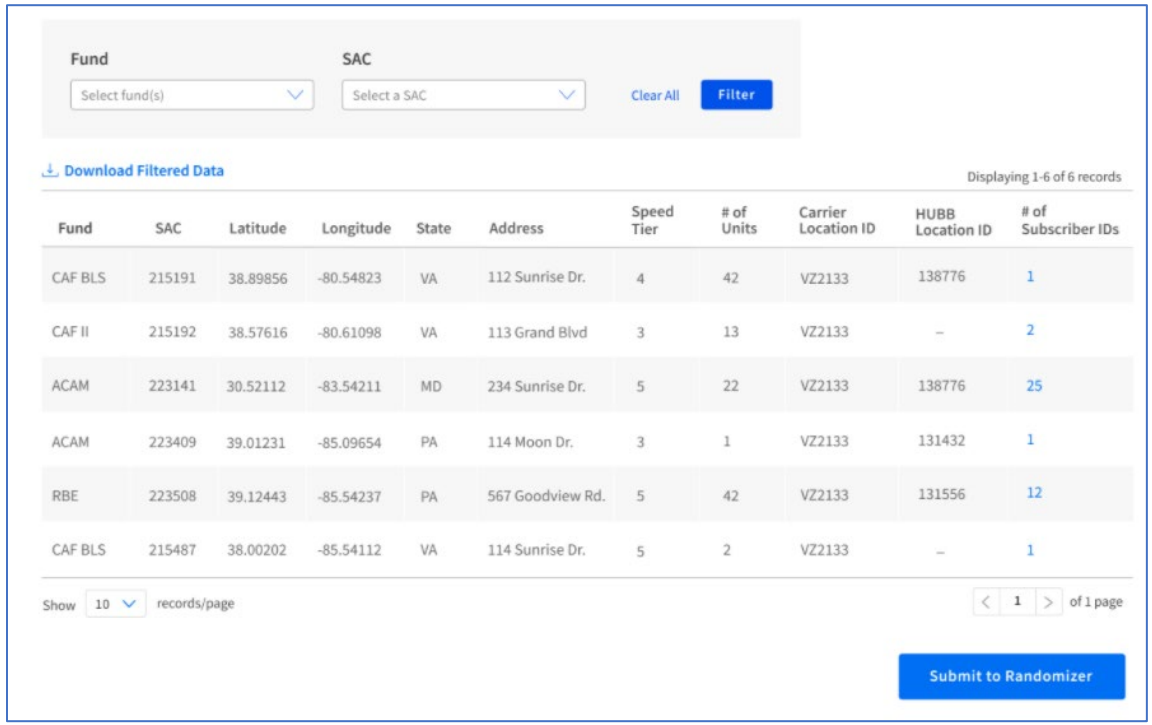
1. **Review** your progress and the summary of data after the validation of the uploaded file is completed.
2. **Download** data errors generated during the validation of the file after upload. You can view a list of Error Codes in the Data Error Codes section of this manual.
3. **Delete** the uploaded file from the PMM system. Please note: Delete will remove all data associated with that file from the PMM system.

All locations without errors will be automatically saved in the PMM system. Locations with errors needs to be downloaded, corrected and re-uploaded in the system through the "Upload Subscriber File" button.



## Reviewing Subscriber Detail

Locations without errors will be automatically saved and shown in a table on the **Subscriber Detail** page.




In this page, you will be able to do the following:

1. **Filter** table data by Fund and SAC. The Filter by Fund feature will default to "All Funds" and allow you to view subscriber ID related data for all Funds. The Filter by SAC feature will default to "All SACs" and allow you to view subscriber ID related data for all SACs.
2. **Download** data filtered by SAC, using the filtering feature labeled, "Filtered by SAC".
3. **Click** "# of Subscriber IDs" in order to ensure the number of subscriber IDs listed matches the subscriber IDs uploaded. Upon click, a modal, listing your subscriber IDs will pop up for your review.
4. **Submit** the locations you have reviewed and are ready to submit to the PMM randomizer tool. **Note:** *Only Certifying Officers will have the Submit to Randomizer Button enabled*.

## Submitting Subscribers to the Randomizer

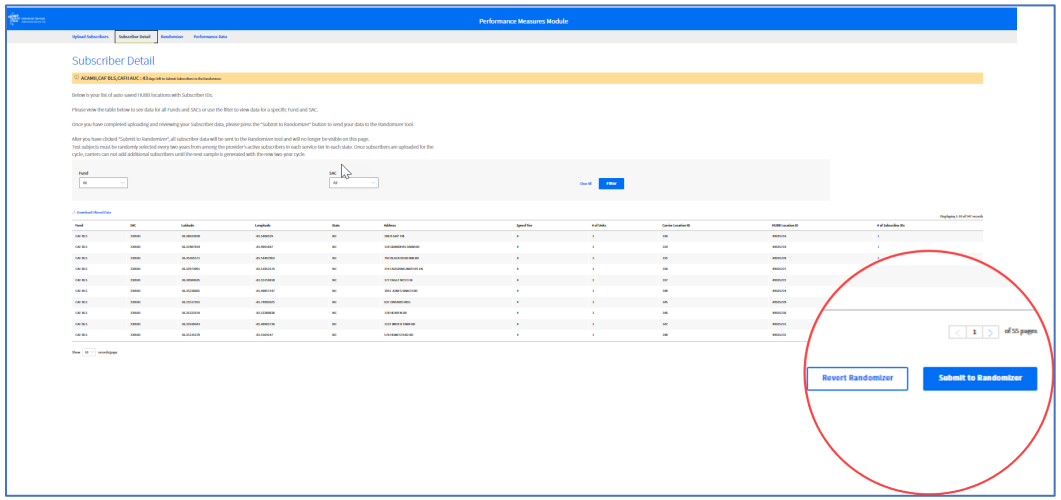
All subscriber IDs for valid HUBB Location IDs will be randomized by:

1. Fund
2. SAC
3. State
4. Speed tier

In order to receive your randomized list for performance testing, you must submit these locations to the Randomizer. This is done through clicking the "Submit to Randomizer" button. **Upon submission, the subscribers associated with these HUBB Location IDs will be locked in the HUBB application**. This means, these locations will not be available for editing until after the performance testing on these subscribers is completed. If you have subscribers in the same SAC that reside across a State boundary then a sample for each State will be generated. **Only a Certifying Officer (SPO Role) of your company is able to engage the 'Submit to Randomizer' button.** Do not submit subscribers for randomization until all your subscribers have been uploaded into the system.

## Unsubmitting Subscribers to the Randomizer (Revert Randomizer)

In order to revert your randomized list for performance testing, you must have previously submit these locations to the Randomizer. ***The Revert Randomizer will not revert samples that have been created.*** Once the generate button has been utilized to create the sample for a SAC, State, Speed tier, it cannot be undone. **Only a Certifying Officer (SPO Role) of your company is able to engage the 'Revert Randomizer' button.** Once selected, the subscriber details page will populate with reverted subscribers for review or updating.



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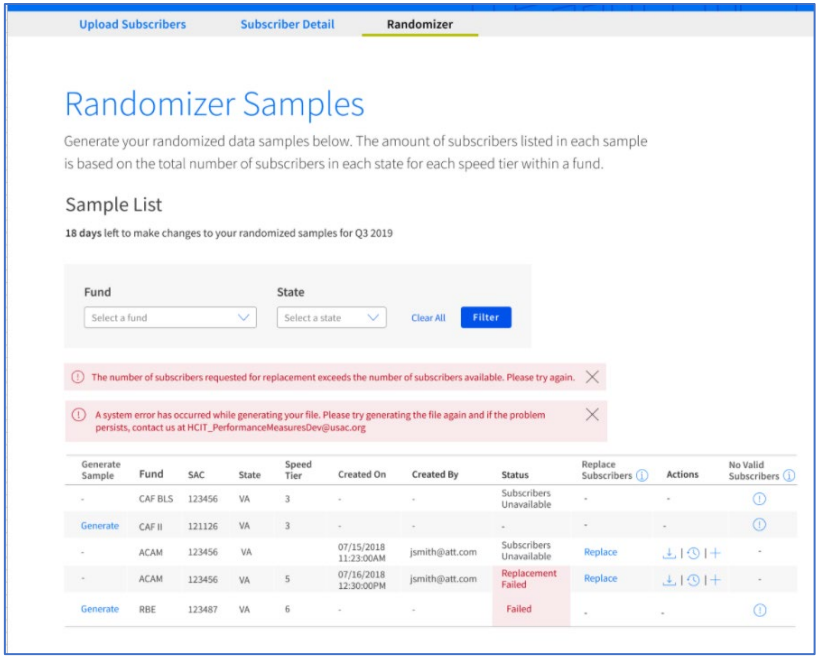
# Randomizer

The Randomizer Samples allow you to generate your randomized samples by your Fund, SAC, State, and Speed tier. You will only see the SACs of the states that are assigned to you. Each Sample will have the required number of subscribers according to the number of subscribers that were sent to the randomizer, on the Subscriber Details Page.

In this table, you will be able to do the following:

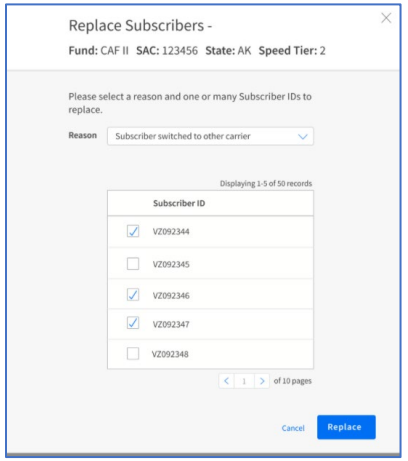
1. Generate a sample for a particular Fund, SAC, State and Speed Tier.
2. Download a generated sample for a particular Fund, SAC, State and Speed Tier.
3. Replace one or more subscribers from a sample.
4. Supplement one or more subscribers to a sample.
5. View history of each sample which will include any changes or updates made to a sample. For example, if a carrier replaces a subscriber from a sample, the history modal will show the details of the replacement action.
6. Click the icon for 'No Valid Subscribers' when there are no more subscribers to supplement or replace within a SAC, State and Speed Tier.




## Steps to Generate Sample:

1. Select a State to view all SACs from that State.
2. Click the 'Generate' button located in the table to generate the sample for each row.
3. Download the generated sample from the 'Actions' column by clicking on the download icon, located in each row.

## Steps to Request Replacement:

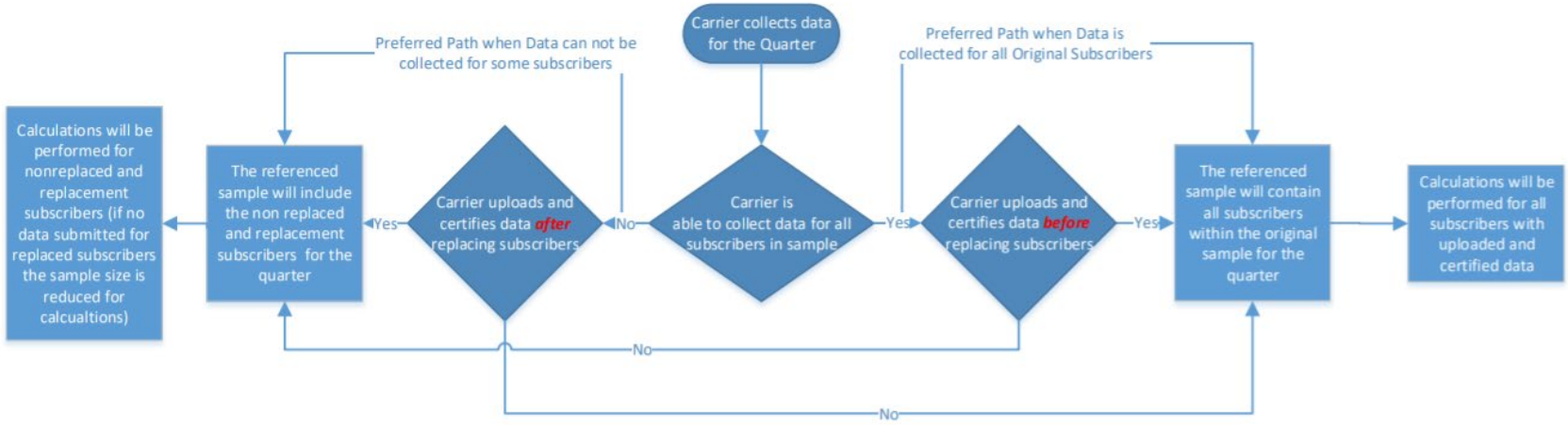



Click on the 'Replace' button in the Replace Subscribers column. *Do not select the "+" icon unless you want to add to overall count of your sample. For example, if you have a sample size of 25 and initiate the supplement process ("+" icon), then add 25 subscribers, your overall sample count will be 50.*

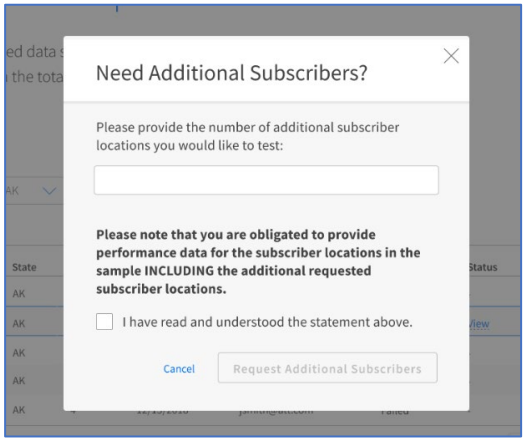
1. Select the reason for the replacement request from the drop-down.
    a. Subscriber refuses to allow installation of testing equipment at customer premises
    b. Subscriber dropped service (no longer active), includes customers who have been discontinued due to lack of payment
    c. Subscriber demands removal of testing equipment at customer premises, includes customer's purposeful destruction of testing equipment
    d. Natural Disaster
    e. Other **(upon submission the subscriber locations in the sample will be frozen until the request has been approved, expect decision within five business days or sooner)**
2. Select the Subscriber IDs that apply to the selected reason.
3. If the selected reason is 'Other', provide an explanation in the displayed text box for the replacement request.
4. Navigate to view all of the Subscriber IDs by clicking on the pagination control.
5. Click 'Replace' to submit the replacement request and exit the modal.
6. Click 'Cancel' to cancel the replacement request and exit the modal.

## Timing to Request Replacement:

Click on the 'Replace' button in the Replace Subscribers column. If data is collected for all subscribers from the original randomized sample list within the quarter, it is highly recommended that carriers submit and certify performance data for the quarter prior to requesting a subscriber replacement for next quarter's data collection. However, if a carrier is unable to contact a subscriber for performance data collection, it is recommended that carriers initiate subscriber replacement for the quarter prior to data submission and certification.



## Steps to Request Supplement:



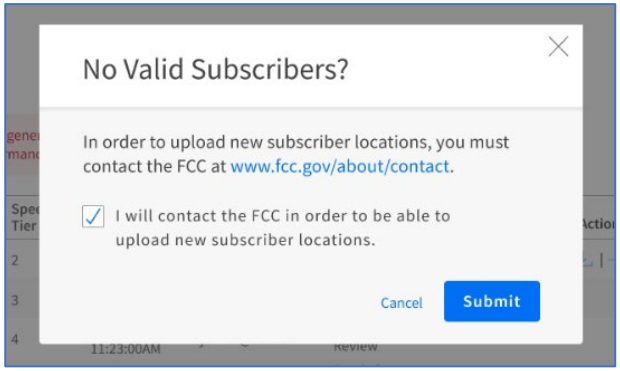

1. **Only commence with this process if you need to increase the sample size for your SAC and speed tier**. For example, if you have a sample size of 10 and you want to increase your sample size to 20, utilize this procedure
2. Enter the number of additional subscriber locations you would like to request.
3. Check the checkbox to acknowledge the bolded statement.
4. Click 'Request Additional Subscribers' button to submit the Supplement Request and exit the screen.
5. Click 'Cancel' to cancel the Supplement Request and exit the screen.

**Note: You will be responsible for testing any additional/supplemented subscribers you add to a sample**

## Steps to submit No Valid Subscriber request with 0 subscribers:

1. If you are attempting to remove a subscriber and have 0 subscribers, please contact USAC for assistance at hcquestions@usac.org.

## Steps to submit No Valid Subscriber request with 1 or more subscribers:

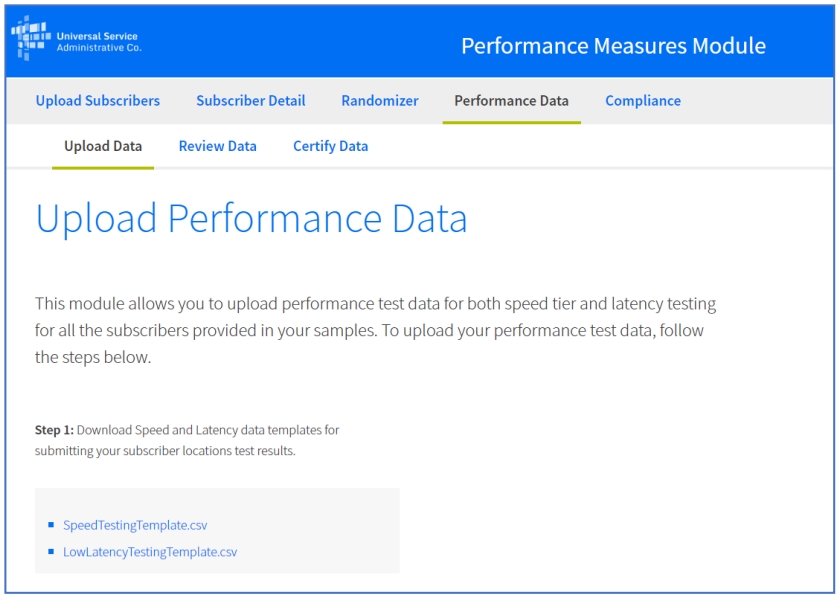



1. Click the icon for 'No Valid Subscribers' when there are no more subscribers to supplement or replace within a SAC, State and Speed Tier.
2. There will be a modal informing you to contact the FCC. You are not required to contact the FCC, the process is automated once the checkbox is selected and submit action is taken.
3. Check the checkbox.
4. If you initiated the no valid subscriber in error. Click 'Cancel' to cancel the No Valid Subscriber request and exit the screen.
5. Otherwise, click 'Submit' button to submit the request for No Valid Subscribers and exit the screen.
6. Once the no valid process is initiated, it must be reviewed and approved by USAC. When in this stage you will see a "Pending Review status

7. Once the request is approved by USAC, the status column will indicate “Pending Upload”.
8. Follow the subscriber upload process and upload additional subscribers. Link process Steps to Download & Re-upload Data.
9. Upon completion of the subscriber replacement, the status column will update to “Ready”.
10. The new random sample is available for download.

## Performance Data/Upload Data

Performance Data is comprised of three pages you will need to Upload, Review and Certify your performance testing data. When you select the Performance Data Tab you will start on the Upload Data page. Step 1 is to download the Speed Testing Template (SpeedTestingTemplate.csv) and the Latency Testing Template (LatencyTestingTemplate.csv). The field definitions for these files can be found in the Data Specifications section**. If your tests has failed due to crosstalk (Test Status 2) or any other reason (Test Status 3), you must submit the following four fields at a minimum: HUBB LOCATION ID, SUBSCRIBER ID, START TEST, TEST STATUS.**




After you have populated the templates with your performance testing data you will be ready to upload your files. Please note the **maximum file size is 200 MB**. You may break your files into multiple smaller files if you exceed the file size limit. After uploading your file, the summary table will be populated.

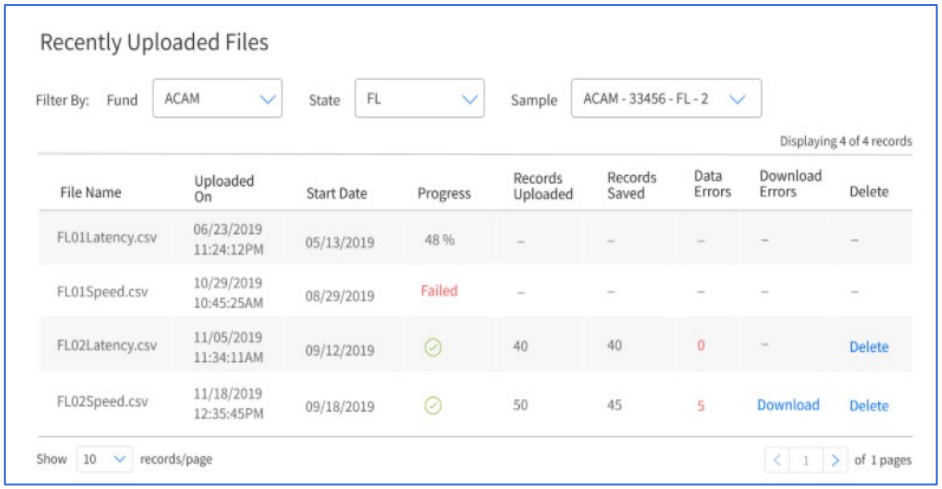
In Step 2 you will upload your individual speed and latency files, you must select the appropriate State, Sample (Fund-SAC-State-Speed Tier format), File Type (Speed Test, Low Latency or High Latency) and Start Date of your seven day data submission period (Use MM/DD/YYYY format). The low latency option will appear for carriers with samples that should be measured against Low Latency (<=100 ms roundtrip). The high latency option will appear for carriers with samples that should be measured against High Latency (<=750 ms roundtrip). You must select the **FIRST** day of your seven-day test period. Upload and Download speed tests must be taken during the same seven-day period. If data is collected at multiple times during the quarter, data must be submitted for the seven-day period in which you want performance data assessed by PMM. The **FIRST** day of the seven-day test period must be selected.

Latency files do not have to begin testing the same day as Speed tests but are still subject to the same seven consecutive day testing requirement. The Data Submission requirement for each type of test is summarized below:

| Test Type (* = required) | Minimum Data Submission Requirement |
|---|---|
| Download Speed | • One successful (**Test Status=1**) test/**hour** between the hours of 6:00pm and Midnight local time (18:00-23:59) in 24 hour time format<br>• Seven Consecutive Days<br>• **42** successfully completed tests (**Test Status=1**) per Subscriber in each sample |
| Upload Speed | • One successful (**Test Status=1**) test/**hour** between the hours of 6:00pm and Midnight local time (18:00-23:59) in 24 hour time format<br>• Seven Consecutive Days<br>• **42** successfully completed tests (**Test Status=1**) per Subscriber in each sample |
| Low Latency | • One test/**minute** between the hours of 06:00pm and Midnight local time (18:00-23:59) in 24 hour time format<br>• Seven Consecutive Days<br>• **2,520** tests (**Test Status=1,2 or 3**) per Subscriber in each sample |
| High Latency | • One test/minute between the hours of 06:00pm and Midnight local time (18:00-23:59) in 24 hour time format<br>• Seven Consecutive Days<br>• 2,520 tests (Test Status=1,2 or 3) per Subscriber in each sample |

Please note the Data Submission Requirement shown above is for ONE Subscriber in your Sample. In other words, you will need to submit as a minimum 42 Upload Speed Tests, 42 Download Speed Tests and 2,520 Latency Tests per Subscriber in EACH Sample in order to meet the minimum Data Submission Requirement.

After your file has completed uploading, it will appear in the 'Recently Uploaded Files' table shown below the 'Upload Performance Data' button.



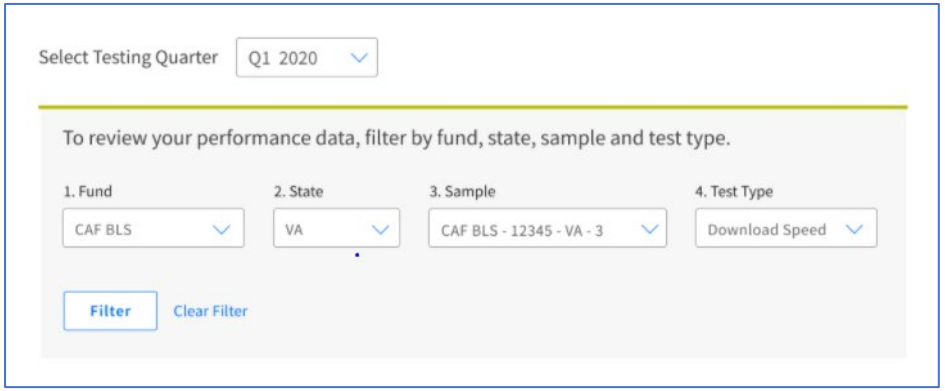

The Recently Uploaded Files table displays the performance data templates that you have uploaded into the system. The table allows you to filter by State and Sample that you have created in the Randomizer section and for which you have uploaded a file with Upload Speed, Download Speed, Low Latency or High Latency test data. This table shows the records (rows of data) that have been uploaded and saved by the system. The table also displays any data errors found in your file(s). If you have data errors in any part of your file(s) you can download a data error log. In order to repair the file you can either delete the previously uploaded file or upload a new file that contains the corrected data elements. A key to the error codes in the data errors log file can be found in the Data Errors section of this user guide.

Once you have successfully uploaded all of your performance data, you are ready to proceed to Step 3, Review Data.

## Review Data

Review Data is the third step in the performance data submission process. In this section you can review the Performance Details of your data and verify that you have met the minimum 7-day data submission requirement at the subscriber level for each of your State, Samples and File Type. Once you have reviewed the data you are ready for the last step, certification.

There is a filter for selecting the appropriate Testing Quarter for your data submission.
Once the Testing Quarter has been identified, you may further filter on State, Sample (Fund-SAC-State-Speed Tier format) and Test Type (Download Speed, Low Latency, High Latency and Upload Speed). Once you have made your selection press the Filter button to see the results displayed in the Data Submission Status Table at the bottom of the page.



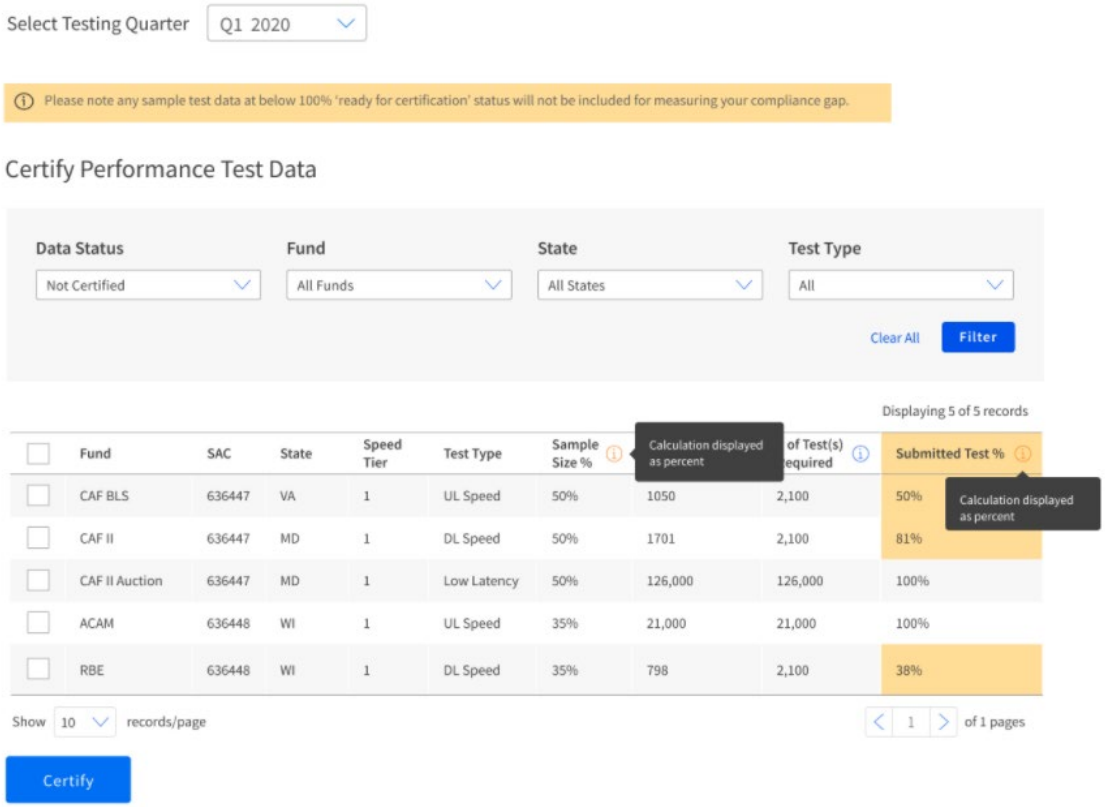

The Data Submission Status table displays the Subscribers in the particular Sample you have selected.
The **Data Submission Status** table provides an overview of the performance tests you have submitted for individual samples. **# of Test(s) Submitted** displays the total count of valid performance tests of the selected Test Type for each Subscriber in the Sample. **# of Incomplete Test(s)** displays the total count of invalid performance tests of the selected Test Type for each Subscriber in the Sample. **Submission Status** indicates whether you have met the minimum **Data Submission** requirement for the Test Type selected. The **minimum data submission** requirement is discussed in the previous section.

The **Download All Incomplete Test(s)** button lets you download an error log file that contains all the Incomplete Test(s) with an associated error message. The definition of errors can be found in the **Incomplete Data Issue Codes** section at the end of this guide.

After submitting your performance data you are ready to go to the last step, Certify and View Performance Results on the Certify Data page.

# Certify Data

Certify/View Performance Results lets you manage the certification of your performance testing data across Testing Quarters, States and Test Types. You will begin by selecting the Testing Quarter for which you wish to certify by selecting the **Select Testing Quarter** filter. The filter will only show the quarter for which you have submitted performance testing data. Please remember you will not be able to update data once it has been certified.




The **Certify Performance Test** Data table displays your performance test data by Testing Quarter. You can select the appropriate testing quarter using the filter 'Select Testing Quarter.' You should only certify data once the 'Data Submission Progress' for Sample and Test Type shows as 100%. You may still certify data that has not met the 100% Data Submission Progress benchmark, however, this data set will be considered 'Incomplete' as it has not yet met the minimum testing requirement standards described in the **Upload Data** page. In addition, samples with incomplete data will not be included in compliance gap calculations.

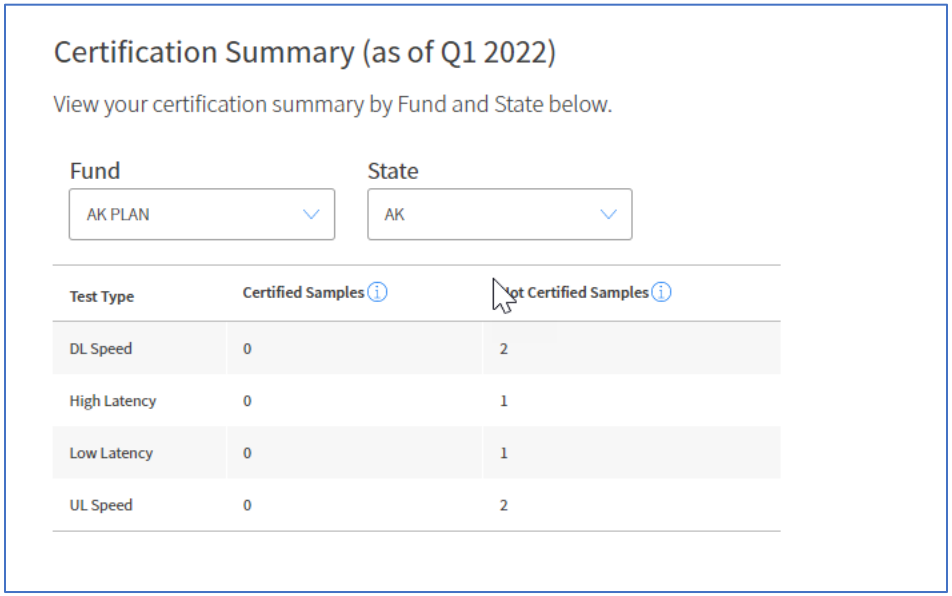
The **Certify Performance Test Data** table contains three filters **Data Status, State and Test Type. Data Status** lets you view data in your samples that is either Certified, Not Certified and Not Uploaded (data in the sample remains 'Incomplete'). The **State** field will only show the State(s) for which you have successfully uploaded performance data. **Test Type**, as described earlier, consists of Download Speed, Upload Speed, High Latency and Low Latency. The fields in the table display information about your individual samples (Fund, **SAC, State, Speed Tier**). The last four columns in the table show your progress towards Data Submission for the sample. **Sample Size %** displays the percent of subscribers with data submitted in comparison the original sample set value. **# of Test(s) Completed** displays the number of tests in the sample that have met the data

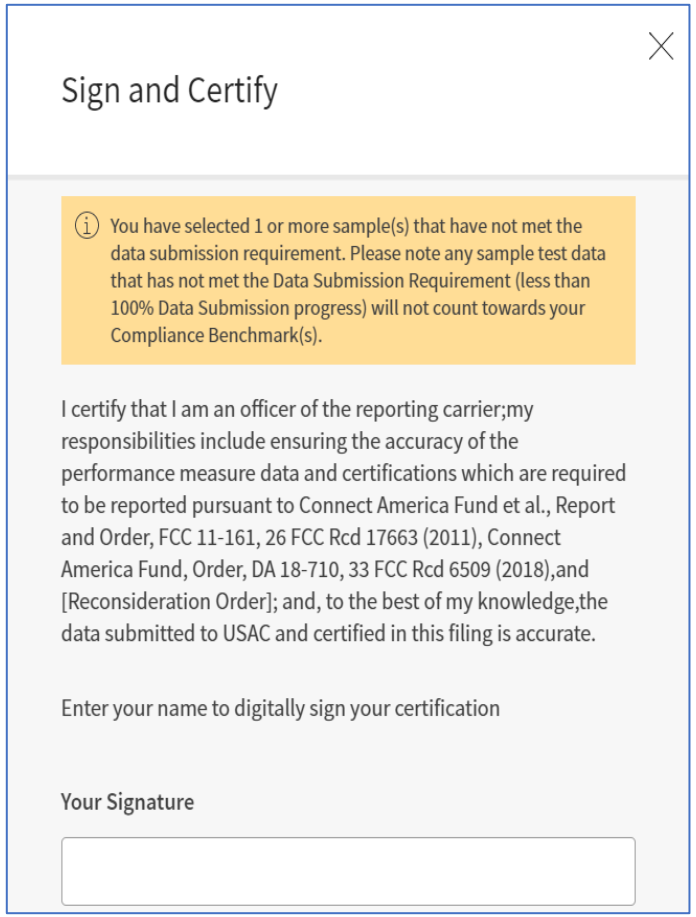
submission requirement. **# of Test(s) Required** displays the number of performance test needed to meet the data submission requirement and is calculated based on the number of subscribers in your sample. For example, a DL Speed Test with five subscribers in the sample will require 210 DL Speed Tests successfully completed, while a sample with 50 subscribers will require 2,100 DL Speed tests successfully completed (Test Status = 1). Note, there is one exception to the UL and DL speed test minimum requirement due to 'cross-talk.' (Test Status = 2) If you have further questions about this exception please review the Performance Measures Order or contact High Cost Operations Support (HCOperations@usac.org). **Data Submission Progress** shows the percentage of completed tests that meet the data submission requirement for the sample. If your data has met or exceeded the Data Submission requirement you are ready to **Certify**. You can select one or more samples in the Certify Performance Test Data table and select the 'Certify' button under the table.

*The sample size percent, # of Test(s) completed, # of Test(s) Required and Data Submission Progress do not display an adjusted calculation for subscriber replacement or pretesting waivers. The PMM readjusts the calculation based upon subscriber replacement or pretesting waivers, when deriving the compliance percentage score.*

Once you have selected 'Certify' you will see a modal appear titled **Sign and Certify.** Please note, if you have not met the Data Submission requirement for the sample there will be a warning message highlighted in Yellow. You can complete certification for the sample(s) selected by typing your name as it is populated below the signature box. Upon completion of certification you will see a confirmation modal which includes a Confirmation number.

The **Certification Summary** table displays the number of Certified and Not Certified samples for each Test Type in the State selected. When you no longer have a count in the Not Certified Sample column you have completed certification for that Test Type.



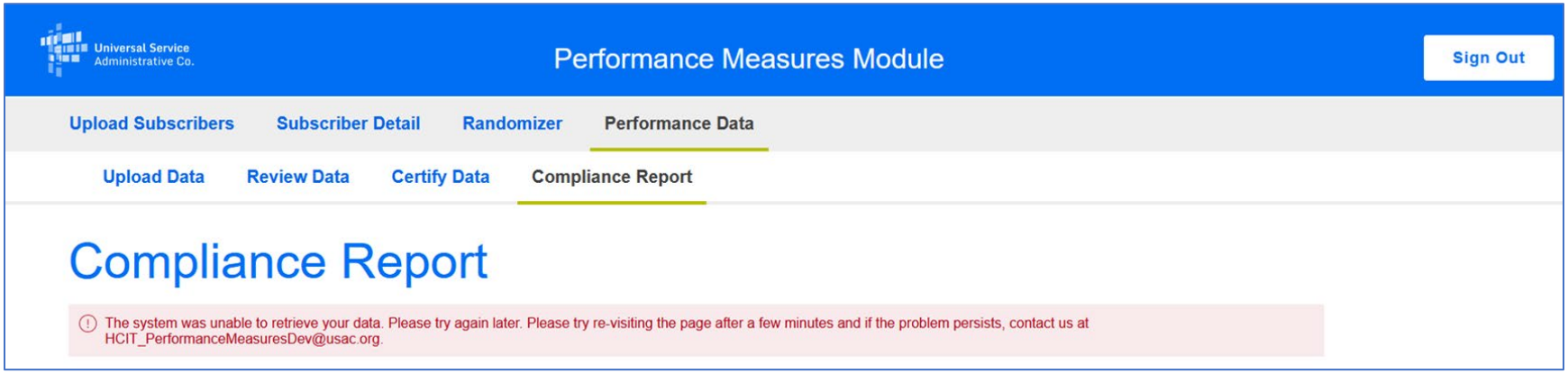





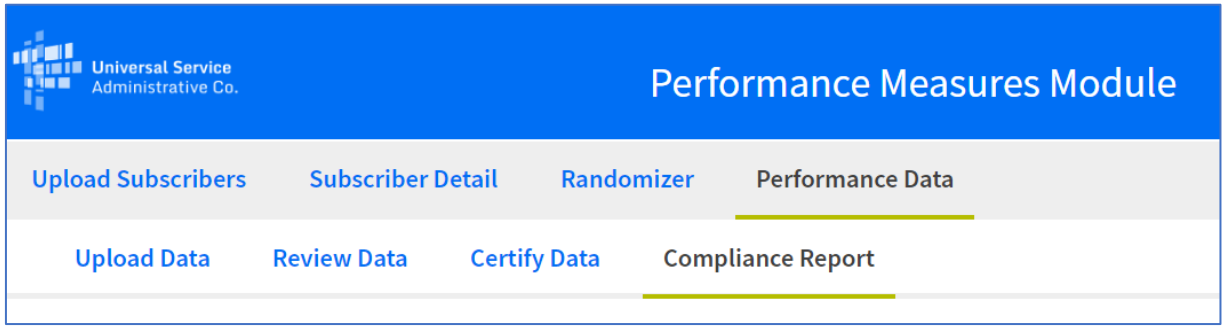

Universal Service Administrative Co.

## Compliance Report

The compliance report is accessible under the performance data menu. The compliance report will display the following error message upon navigating to the page. The error message will no longer display after the PMM system completes compliance report calculations. Carriers will receive notification of availability of the compliance report calculations once available.



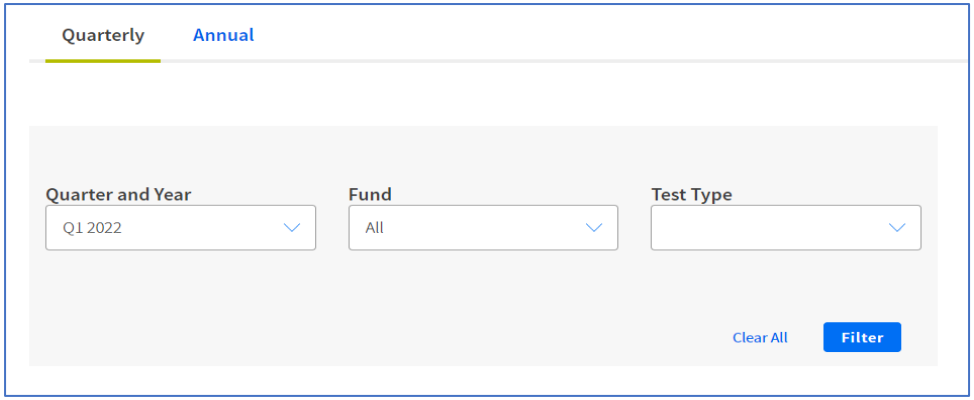

The compliance report will display a summary assessment of performance data results for each SAC.



## Quarterly Compliance

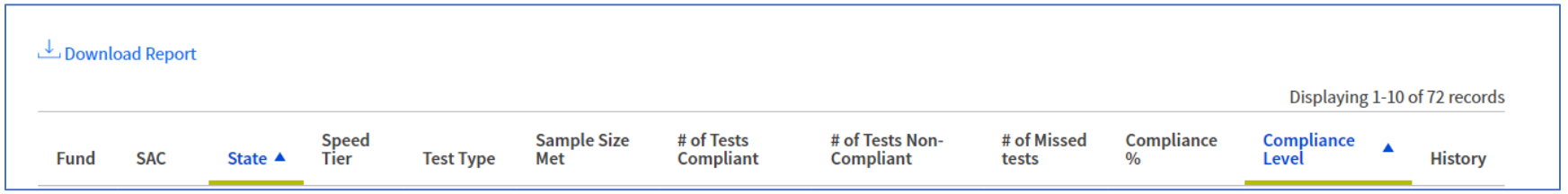
When navigating to the Compliance Report page, select quarterly and the applicable quarter within the Quarter Filter. The Quarter Filter will be pre-populated with a list of all the quarters for which the compliance was calculated. The Quarter and year values will be in descending order. When selecting the Test Type Filter, the following values will appear in the drop-down menu with the selected default value of "All":

- All
- DL Speed
- UL Speed
- High Latency
- Low Latency




If selected fields require correcting, choose the "Clear" button to clear the data. The Test Type Filter will default back to "All" selected for test type. Upon scrolling down on the 'Compliance Report' page, the following page components should display in a table format:

i. Fund
ii. SAC
iii. State
iv. Speed Tier
v. Test Type
vi. # of Tests Compliant
vii. # of Tests Non-Compliant
viii. # of Missed Tests
ix. Compliance %
x. Compliance Level

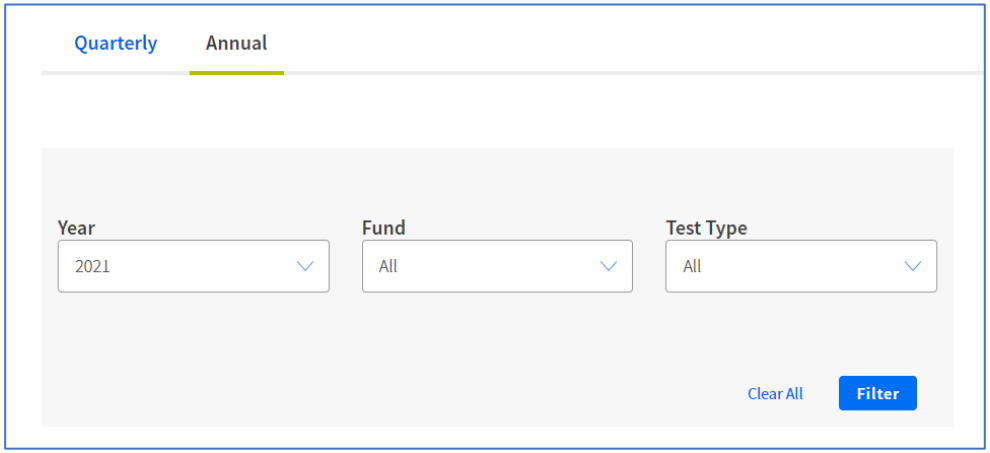



If the sample and the test-type combination is not eligible for compliance calculation due to not certifying data submission, the value will be designated with a dash. Where the compliance calculation % value is greater than 100%, the respective compliance % column will be capped at 100% and populated with 100%. All Compliance % values are truncated to whole numbers. An exportable table formatted report is available for download by selecting the Download Report button on the top left of the table for data export.

## Annual Compliance

When navigating to the Compliance Report page, select Annual. The Year Filter will be pre-populated with a list of all the years for which the compliance was calculated. The year values will be in descending order. When selecting the Test Type Filter, the following values will appear in the drop-down menu with the selected default value of “All”:

- All
- DL Speed
- UL Speed
- High Latency
- Low Latency




If selected fields require correcting, choose the “Clear” button to clear the data. The Test Type Filter will default back to “All” selected for test type.

Upon scrolling down on the 'Compliance Report' page, the following page components should display in a table format:

i. Fund
ii. SAC
iii. State
iv. Speed Tier
v. Test Type
vi. # of Tests Compliant
vii. # of Tests Non-Compliant
viii. Compliance %
ix. Compliance Level


If the sample and the test-type combination is not eligible for compliance calculation due to not certifying data submission, the value will be designated with a dash. Where the compliance calculation % value is greater than 100%, the respective compliance % column will be capped at 100% and populated with 100%. All Compliance % values are truncated to whole numbers. An exportable table formatted report is available for download by selecting the Download Report button on the top left of the table for data export.

## Compliance Report Calculations

***More detailed information about the compliance report calculations can be found on USAC's website: https://www.usac.org/wp-content/uploads/high-cost/documents/Tools/PMM-Compliance-Calculations.pdf.***

The **"# of Tests Compliant"** column is populated with the total count of certified valid successful tests (status 1) that meet the compliance benchmark. (**i.e** test data certified with test status 1 which meets the following compliance calculation criteria based on the test-type value selected). Either low latency or high latency is assessed in the compliance calculations based upon Fund and technology type.

| Download Speed | Upload Speed | Low Latency | High Latency |
|---|---|---|---|
| Total count of certified valid successful Download Speed Tests with a Calculated Mbps >= 80% of the Obligated Speed Tier's Download speed | Total count of certified valid successful Upload Speed Tests with a Calculated Mbps >= 80% of the Obligated Speed Tier's Upload speed | Total count of certified valid successful Latency Tests with an RTT ≤ 100ms | Total count of certified valid successful Latency Tests with an RTT ≤ 750ms |

The **"# of Tests Non-Compliant"** column is populated with the total count of certified valid successful tests (status 1) that do not meet the compliance benchmark. (**i.e** test data certified with test status 1 which do not meet the following compliance calculation criteria based on the test-type value selected.) Either low latency or high latency is assessed in the compliance calculations based upon Fund and technology type.

| Download Speed | Upload Speed | Low Latency | HIgh Latency |
|---|---|---|---|
| Total count of certified valid successful Download Speed Tests with a Calculated Mbps < 80% of the Obligated Speed Tier's Download speed | Total count of certified valid successful Upload Speed Tests with a Calculated Mbps < 80% of the Obligated Speed Tier's Upload speed | Total count of certified valid successful Latency Tests with an RTT >100ms | Total count of certified valid successful Latency Tests with an RTT > 750ms |

The **"# of Missed Tests"** column is populated with difference between the total number of required tests submitted for each test type and the total count of certified valid tests (status 1, 2 and 3). Either low latency or high latency is assessed in the compliance calculations based upon Fund and technology type.

| Download Speed | Upload Speed | Latency |
|---|---|---|
| Total count of expected tests for each subscriber within the sample for each hour over a 7-day period between 6:00 PM and 12:00 AM taking into account cross-talk exception less the Total count of certified valid Download Speed Tests | Total count of expected tests for each subscriber within the sample for each hour over a 7-day period between 6:00 PM and 12:00 AM taking into account cross-talk exception less the Total count of certified valid Upload Speed Tests | Total count of expected tests for each subscriber within the sample for each minute over a 7-day period between 6:00 PM and 12:00 AM less the Total count of certified valid Latency Tests |

**Compliance % values** are calculated by dividing the number of certified valid successful tests compliant by the total number of certified valid of tests (status 1) plus the total number of tests missed.

Compliance % values are truncated to whole numbers. Where the compliance is not calculated, it will be reflected as incomplete and designated with a dash. Where the compliance calculation % value is greater than 100%, the respective compliance % column will be capped at 100% and populated with 100%. Based on the compliance % values, the **compliance levels** will be populated and display the following:

| Compliance Level | Compliance % (x) |
|---|---|
| Fully Compliant | **x** ≥ 100% |
| Level 1 | 85%≤ **x** < 100% |
| Level 2 | 70% ≤ **x** < 85% |

| Compliance Level | Compliance % (x) |
|---|---|
| Level 3 | 55% ≤ **x** < 70% |
| Level 4 | 0% < **x** < 55% |
| Incomplete | null |

# Data Specifications

## Subscriber Upload

The table below provides the specification for the **Subscriber Upload** CSV file.

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| SAC | The 6-digit Study Area Code (SAC) for the study area containing the location.<br>*This field is populated into your template but is not validated for PMM data submission. Edits to this field in your PMM data file upload will not be reflected in the HUBB.* | Integer | 6 | 579999 |
| Latitude | Latitude of the location to which you have made service available and tested. It must have at least 6 decimal places.<br>Coordinates must be in the WGS84 or NAD83 geographic coordinate system.<br>*This field is populated into your template but is not validated for PMM data submission. Edits to this field in your PMM data file upload will not be reflected in the HUBB.* | Float | N/A | 39.509220 |
| Longitude | Longitude of the location to which you have made service available. It must have at least 6 decimal places.<br>Coordinates must be in the WGS84 or NAD83 geographic coordinate system.<br>*This field is populated into your template but is not validated for PMM data submission. Edits to this field in your PMM data file upload will not be reflected in the HUBB.* | Float | N/A | -98.433700 |

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| Address | Number and street address of this location. If possible, use the standardized Postal Service format. However, this information will be neither standardized nor validated by the HUBBHUBB.<br>If a location does not have a traditional street address, enter a description of where the served premises is located (e.g., an intersection, a road, etc.).<br>*This field is populated into your template but is not validated for PMM data submission. Edits to this field in your PMM data file upload will not be reflected in the HUBB.* | Text | 100 | 715 Wisconsin Street |
| State | 2-letter postal abbreviation of the state associated with this location.<br>*This field is populated into your template but is not validated for PMM data submission. Edits to this field in your PMM data file upload will not be reflected in the HUBB.* | Text | 2 | KS |
| Speed Tier | Select link to speed tier table with document. **Speed Tier Table** | Integer | 1 | 3 |

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| # of Units | The number of units associated with this location.<br>If the address or building contains only one housing unit or business location, enter 1.<br>If the location is a building with multiple units, such as an apartment or office building containing qualifying locations, enter the number units at that location.<br>*This field is populated into your template but is not validated for PMM data submission. Edits to this field in your PMM data file upload will not be reflected in the HUBBHUBB.* | Integer | N/A | 1 |
| Carrier Location ID | The Carrier Location ID field is available for carriers to add their internal ID associated with a location. If you do not have an ID available, this field can be left blank.<br>*This field is populated into your template but is not validated for PMM data submission. Edits to this field in your PMM data file upload will not be reflected in the HUBBHUBB.* | Text | 50 | 12345 |
| HUBBHUBB Location ID* | The HUBB location ID field will be entered in the subscriber data upload template. This id must remain unchanged. **This field is REQUIRED.** | Text | 50 | A12345 |

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| Subscriber ID* | The subscriber ID is the unique identifier assigned by the Provider to designate active subscribers that are occupying locations previously reported in the HUBB. If you have multiple Subscriber IDs for a single HUBB location, you MUST use a semicolon '**;**' instead of a comma '**,**' before the next Subscriber ID. **This field is REQUIRED.** | | 50 | ,A-80098678 or ;A-78694494 |

## Speed Data Upload Template

The table below provides the specification for the **Speed Data Upload Template (Speed Testing Template)** CSV file

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| HUBB Location ID* | The HUBB location ID field will be entered in the Speed Testing or Latency testing template. This ID can be retrieved from the sample file generated in the Randomized Module. This id must remain unchanged. **This field is REQUIRED.** | Text | N/A | A12345 |

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| Subscriber ID* | The subscriber ID is the unique identifier assigned by the Provider to designate active subscribers that are occupying locations previously reported in the HUBB. This ID can be retrieved from the sample file generated in the Randomized Module. This id must remain unchanged.<br>**This field is REQUIRED.** | Text | N/A | ,A-80098678 |
| Speed Type* | Speed Type = '1' for Download Speed (DL) or '2' for Upload Speed (UL) | Integer | 1 | '1' or '2' |
| IP Target* | IP Target = (host name or ip address) of the IP server that is designated for the test | String | 100 | '192.168.10.10'<br>Or 'MEX-IX McAllen' |
| Start Test* | **Start Test = ISO 8601 UTC format to include milliseconds AND time zone offset.**<br>**Ex: yyyy-mm-dd hh:mm:ss:SSS±HH:MM**<br>**("+" for positive UTC timezone offset, "-" for negative UTC timezone offset)**<br>**This is the only accepted format for this field.** | String | 200 | '2020-03-05 01:03:01:123-05:00' |

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| End Test* | **End Test = ISO 8601 UTC format to include milliseconds AND time zone offset.**<br>**Ex: yyyy-mm-dd hh:mm:ss:SSS±HH:MM**<br>**("+" for positive UTC timezone offset, "-" for negative UTC timezone offset)**<br>**This is the only accepted format for this field.** | String | 200 | '2020-03-05 01:03:01:143-05:00' |
| Bytes* | Bytes = total bytes received or sent across all connections or threads | Integer | 50 | '20000' |
| Test Status* | Test Status = Status of Test (1=success; 2= test not run due to cross talk traffic; 3= test not run due to other reason) | Integer | 1 | '1' |
| Comment (optional) | Text string, not required | String | 500 | 'This location had faulty testing equipment that was replaced during the test period' |

## Latency Data Upload Template

The table below provides the specification for the **Speed Data Upload Template (Speed Testing Template)** CSV file.

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| HUBB Location ID* | The HUBB location ID field will be entered in the subscriber data upload template. This ID can be retrieved from the sample file generated in the Randomized Module. This id must remain unchanged. | Text | N/A | A12345 |
| Subscriber ID* | The subscriber ID is the unique identifier assigned by the Provider to designate active subscribers that are occupying locations previously reported in the HUBB. . This ID can be retrieved from the sample file generated in the Randomized Module. This id must remain unchanged. | Text | N/A | ,A-80098678 |
| IP Target* | IP Target = (host name or ip address) of the IP server that is designated for the test | String | 100 | '192.168.10.10' Or 'MEX-IX McAllen' |

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| Start Test* | Start Test = ISO 8601 UTC format to **include milliseconds** AND **time zone offset**.<br>Ex: yyyy-mm-dd hh:mm:ss:SSS±HH:MM<br>("+" for positive UTC timezone offset, "-" for negative UTC timezone offset)<br>**This is the only accepted format for this field. Daylight Savings Time is supported** | String | 200 | '2020-03-05 01:03:01:123-05:00' |
| Latency* | Roundtrip time (RTT) in **milliseconds** | Integer | 20 | '200' |
| Packets Sent* | Packets Sent= Number of packets successfully sent | Integer | 100 | '20' |
| Packets Received* | Packets Received = Number of packets successfully received | Integer | 100 | '18' |
| Test Status* | Test Status = Status of Test (1=success; 2= test not run due to cross talk traffic) | Integer | 1 | '1' |

| Field (* = required) | Description | Data Type | Max Length | Example |
|---|---|---|---|---|
| Comment (optional) | Text string, not required | String | 500 | 'This location had faulty testing equipment that was replaced during the test period' |

## Data Error Codes

If submitted data fails validations, you may download the **Data Errors** CSV file from the "Recently Uploaded Files" table on the **Upload Subscriber List** page. The table below provides a list of all data error codes generated by the system.

| Category | Code or Error Message | Description |
|---|---|---|
| File Error | File name contains one or many invalid characters. Please reference the USAC-provided Data Standards for file naming convention instructions. | File names cannot have the following invalid characters:<br>• Left curly brace ("{")<br>• Backslash ("\")<br>• Non-printable ASCII characters (128–255 decimal characters)<br>• Caret ("^")<br>• Right curly brace ("}")<br>• Percent character ("%")<br>• Grave accent / back-tick ("`")<br>• Right square bracket ("]")<br>• Quotation marks<br>• 'Greater Than' symbol (">")<br>• Left square bracket ("[")<br>• Tilde ("~")<br>• 'Less Than' symbol ("<")<br>• 'Pound' character ("#")<br>• Vertical bar / pipe ("\|") |
| File Error | The uploaded file is not in CSV format. Please reference the USAC-provided template. | The uploaded file must be in CSV format. |
| File Error | The uploaded file has an incorrect header row. Please reference the USAC-provided template. | The uploaded file's first row (also known as the header row) must match the first row of the template you downloaded by clicking the Generate HUBB Data button. |

| Category | Code or Error Message | Description |
|---|---|---|
| File Error | The uploaded file has no records. Please add records and try again. | You must have a header row and at least one subscriber record. |
| Data Error | HUBBHUBB_LOCATION_ID_REQUIRED | The system will check that the HUBB Location ID field is populated. |
| Data Error | HUBBHUBB_LOCATION_ID_INVALID_FORMAT | The system will check that the HUBB Location ID field is an integer. |
| Data Error | HUBBHUBB_LOCATION_ID_INVALID_DUPLICATE | The system will check that the HUBB Location ID field is unique across the file. |
| Data Error | HUBBHUBB_LOCATION_ID_INVALID | The system will check that the HUBB Location ID matches a certified HUBB Location ID from the HUBB. |
| Data Error | HUBBHUBB_LOCATION_ID_INVALID_SAC_ASSOCIATION | The system will check that the HUBB_LOCATION_ID's associated SAC in HUBBHUBB matches the PMM user's list of SACs from their entitlements. |
| Data Error | INVALID_HUBB_LOCATION_ID_EXTENDED_SUBMISSION_WINDOW | The system will check the uploaded file's HUBB Location ID's Fund, SAC, State, and Speed Tiers match the randomized sample's Fund, SAC, State, and Speed Tier in the 'Pending Upload' status.<br>The file's system upload date must also fall within the Subscriber Sample Extension Window for that same Fund, SAC, State, and Speed Tier. |
| Data Error | SUBSCRIBER_ID_REQUIRED | The system will check that the Subscriber ID(s) field is populated. |

| Category | Code or Error Message | Description |
|---|---|---|
| Data Error | SUBSCRIBER_ID_DELIMITER_INVALID | The system will check that each Subscriber ID(s) within a Subscriber.csv record is separated using a semicolon as a delimiter. |
| Data Error | SUBSCRIBER_ID_DUPLICATE_RECORD | The system will check that the Subscriber ID is unique within each row. |
| Data Error | SUBSCRIBER_ID_INVALID_FORMAT | The system will check the subscriber ID(s) do not have any double quotes. |
| Data Error | SUBSCRIBER_ID_DUPLICATE | The system will check that the Subscriber ID field and the corresponding HUBB Location ID's SAC combination is unique within the file AND that the Subscriber ID field and the corresponding HUBB Location ID's SAC combination is not repeated for clean Subscriber records (Subscriber records with no errors). |
| Data Error | SUBSCRIBER_ID_INVALID_COUNT | The system will check that the count of Subscriber ID(s)'s for a record in the Subscriber.csv ≤ the matching HUBB Certified location record's number of units. |

## Performance Data Upload Error Codes

| | | |
|---|---|---|
| File Error | The current version of this application supports the upload of the file up to 200 MB in size. To upload your data, please split-out your data into multiple files and re-upload them separately. | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check that the file size is less than or equal to 200 MB |
| File Error | There is no Randomized Sample for <QQ YYYY>. The system cannot process your request Please click Okay to proceed. | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The Quarter value will be derived from the Start test-date value selected by the user during the file upload.<br><br>**Quarter 1:** 01/01 - 03/31<br>**Quarter 2:** 04/01 - 06/30<br>**Quarter 3:** 07/01 - 09/30<br>**Quarter 4:** 10/01 - 12/31 |
| File Error | You have previously submitted test data for the selected sample: <SAMPLE> with a different Start Date<STARTDATE>. If you would like to upload a test data file with a new start date, please delete the existing file from the Performance Measures Module (PMM) and submit a test data file with a new Start Date. Please click Okay to proceed. | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the Start Date value does not match the existing start date for the sample and test type selected in the PMM database. |
| Data Error | DUPLICATE_RECORD | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if each row records have at least one unique value on a file level |

| | | |
|---|---|---|
| Data Error | DUPLICATE_TEST_DATA_SUBMITTED | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the same row record is in the PMM database. |
| Data Error | SUBSCRIBER_ID_REQUIRED | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check that the Subscriber ID field is populated. |
| Data Error | SUBSCRIBER_ID_INVALID | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system should check if the Subscriber ID field matches the Subscriber ID from the list of subscribers within the sample for the Quarter. |
| Data Error | HUBB_LOCATION_ID_REQUIRED | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check that HUBB Location ID field is populated. |
| Data Error | HUBB_LOCATION_ID_INVALID_FORMAT | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check that HUBB Location ID value is an integer. |
| Data Error | HUBB_LOCATION_ID_INVALID_SUBSCRIBER_ID_ASSOCIATION | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system should check if HUBB Location ID matches the associated Subscriber ID in the PMM database. |

| | | |
|---|---|---|
| Data Error | IP_TARGET_REQUIRED | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the IP Target field is populated. |
| Data Error | IP_TARGET_LENGTH_INVALID | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the IP target field has a maximum of 100 characters |
| Data Error | START_TEST_REQUIRED | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the Start Test Field is populated. |
| Data Error | START_TEST_INVALID_FORMAT | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the Start Test Field is in yyyy-mm-dd hh:mm:ss: SSS±HH:MM (UTC offset) |

<table>
<tr>
<td>Data Error</td>
<td>START_DATE_INVALID_TIME_RANGE</td>
<td>Applies to: SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br><br>The system will check if the<br><br>YYYY, MM, DD, hh, mm, ss value of the Start Test Date is within the following range:<br><br>
<table>
<tr><th>Values</th><th>Range(Inclusive)</th></tr>
<tr><td>YYYY</td><td>2019 - Current Year (Server timestamp)</td></tr>
<tr><td>MM</td><td>01-12</td></tr>
<tr><td>DD</td><td>01-31</td></tr>
<tr><td>hh</td><td>00-23</td></tr>
<tr><td>mm</td><td>00-59</td></tr>
<tr><td>ss</td><td>00-59</td></tr>
</table>
</td>
</tr>
<tr>
<td>Data Error</td>
<td>START_TEST_INVALID_OFFSET</td>
<td>Applies to: SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br><br>The system will check if the UTC offset of the Start Test Date is within (-12 to + 14) inclusive</td>
</tr>
<tr>
<td>Data Error</td>
<td>START_TEST_INVALID</td>
<td>Applies to: SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br><br>The system will check if the Start Test Field time_stamp is before the server timestamp</td>
</tr>
</table>

| | | |
|---|---|---|
| Data Error | START_TEST_MISMATCH | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the Start Test value matches the Quarter defined by the Start Date Selected in the front end while uploading the respective file. |
| Data Error | START_TIMESTAMP_INVALID | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the Start Test Field is within the 18:00:00:000 to 23:59:59:999 |
| Data Error | TEST_STATUS_REQUIRED | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the Test Status Field is populated. |
| Data Error | TEST_STATUS_INVALID_FORMAT | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the Test Status value is an integer. |
| Data Error | TEST_STATUS_INVALID | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the Test Status Field is either '1' or '2'. |
| Data Error | COMMENT_LENGTH_INVALID | **Applies to:** SpeedTestingTemplate.csv, LowLatencyTestingTemplate.csv<br>The system will check if the comments field has a maximum of 200 characters. |
| Data Error | SPEED_TYPE_REQUIRED | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the Speed Type Field is populated. |

| | | |
|---|---|---|
| Data Error | SPEED_TYPE_INVALID_FORMAT | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the Speed Type Field value is an Integer. |
| Data Error | SPEED_TYPE_INVALID | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the Speed Type Field value is either '1' or '2'. |
| Data Error | SPEED_TYPE_CERTIFIED_FOR_QUARTER | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the Speed type and the sample had been certified for a given quarter. |
| Data Error | END_TEST_REQUIRED | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the EndTest Field is populated. |
| Data Error | END_TEST_INVALID_FORMAT | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the EndTest Field value is in yyyy-mm-dd hh:mm:ss: SSS±HH:MM (UTC offset). |

<table>
<tr>
<td>Data Error</td>
<td>START_DATE_INVALID_TIME_RANGE</td>
<td>Applies to: SpeedTestingTemplate.csv<br>The system will check if the<br>YYYY, MM, DD, hh, mm, ss value of the End Test Date is within the following range:
<table>
<tr><th>Value</th><th>Range (Inclusive)</th></tr>
<tr><td>YYYY</td><td>2019 - Current Year (Server timestamp)</td></tr>
<tr><td>MM</td><td>01-12</td></tr>
<tr><td>DD</td><td>01-31</td></tr>
<tr><td>hh</td><td>00-23</td></tr>
<tr><td>mm</td><td>00-59</td></tr>
<tr><td>ss</td><td>00-59</td></tr>
</table>
</td>
</tr>
<tr>
<td>Data Error</td>
<td>END_TEST_INVALID_OFFSET</td>
<td>Applies to: SpeedTestingTemplate.csv<br>The system will check if the UTC offset of the End Test field is within (-12 to + 14).</td>
</tr>
<tr>
<td>Data Error</td>
<td>END_TEST_INVALID</td>
<td>Applies to: SpeedTestingTemplate.csv<br>The system will check if the End Test Field time_stamp is on or before the server timestamp.</td>
</tr>
</table>

| | | |
|---|---|---|
| Data Error | END_TEST_MISMATCH | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the EndTest value matches the Quater defined by the Start Date Selected in the front end while uploading the respective file. |
| Data Error | START_END_TEST_MISMATCH | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the EndTest Field value is greater than the Start Test value. |
| Data Error | END_TIMESTAMP_INVALID | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the EndTest Field value is within the 18:00:00:000 to 23:59:59:999 |
| Data Error | BYTES_REQUIRED | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the Bytes Field is populated. |
| Data Error | BYTES_INVALID_FORMAT | **Applies to:** SpeedTestingTemplate.csv<br>The system will check if the Bytes value is a double data type. |
| Data Error | LATENCY_REQUIRED | **Applies to:** LowLatencyTestingTemplate.csv<br>The system will check if the Latency Field is populated. |
| Data Error | LATENCY_INVALID_FORMAT | **Applies to:** LowLatencyTestingTemplate.csv<br>The system will check if the Latency value is an integer. |
| Data Error | PACKETS_SENT_REQUIRED | **Applies to:** LowLatencyTestingTemplate.csv<br>The system will check if the packets sent field is populated. |

| | | |
|---|---|---|
| Data Error | PACKETS_SENT_INVALID_FORMAT | **Applies to:** LowLatencyTestingTemplate.csv<br>The system will check if the packets sent value is a double. |
| Data Error | PACKETS_RECEIVED_REQUIRED | **Applies to:** LowLatencyTestingTemplate.csv<br>The system will check if the packets received field is populated. |
| Data Error | PACKETS_RECEIVED_INVALID_FORMAT | **Applies to:** LowLatencyTestingTemplate.csv<br>The system will check if the packets received value is a double. |
| Data Error | PACKETS_RECEIVED_INVALID | **Applies to:** LowLatencyTestingTemplate.csv<br>The system will check if the packets received is less than or equal to packets sent. |

## Incomplete Data Issue Codes

| Category | Code or Error Message | Description |
|---|---|---|
| Issue Code | INCOMPLETE_DATA_SUBMITTED_DAYS | **Applies to:** Speed Testing & Latency Testing<br>Applicable for all the subscribers if the test-data submitted for the subscriber **has not met** the 7 consecutive days of data submission with at least one valid test per hour within test specified hour (18:00-23:59) for speed testing and at least one valid test per minute within test specified hour (18:00-23:59) for latency testing. |

| Category | Code or Error Message | Description |
|---|---|---|
| Issue Code | INCOMPLETE_DATA_SUBMITTED_HOURS | **Applies to:** Speed Testing<br>Applicable for all the subscribers if the test-data submitted has 7 consecutive days of data submitted with at least one valid test per hour, but at least one hour of the test-specified period (18:00-23:59) within 7 day period is missing a valid test i.e the test data submitted with test status 1. |
| Issue Code | INCOMPLETE_DATA_SUBMITTED_MINUTES | **Applies to:** Latency Testing<br>Applicable for all the subscribers if the test-data submitted **has 7 consecutive days of data submitted** with at least one valid test per minute, **but at least one minute of the test-specified period (18:00-23:59) within the 7 day period is missing a valid test** i.e the test data submitted with test status 1. |