

# Current NAC MVP Specifications

*Updated 11/9/2021*

**Purpose:** To provide a detailed understanding of:

- What the NAC will be able to do when it is first put into use by states to detect matches and take initial actions
- Current progress toward reaching the desired functionality
- What's out of scope and may create some limitations for users

The scope outlined in this document is not final. It represents the team's current understanding but may change as a result of agile project management decisions and potential regulatory changes.

## State agencies can share SNAP participant data to the NAC

The NAC will allow states to share de-identified participant data by API.

### **User story**

As a state agency information system manager, I need to be able to share bulk SNAP data of current SNAP participants to the NAC every day in an automated way so that the NAC can create accurate matches.

### **Requirements currently met:**

- ✓ The NAC allows secure upload and storage of de-identified participant records through the bulk upload APIs
- ✓ Access to the APIs is only available to systems that possess a valid API key
- ✓ System administrators can create new API keys to onboard new states
- ✓ Upload accepts these data elements:
  - A secure hash (required), used as a replacement for the participant's last name + SSN + DOB
    - This field is required
  - Participant ID
    - This field is required
  - Case ID
    - This field is required
  - The last 3 months/dates in which the participant received benefits
    - This field is optional
  - Final benefit date/participant close date\*
    - This field is optional
  - Whether the participant's location needs to be protected\*\*

- This field is optional
- ✓ Data sent to the API must be correctly formatted or the upload will be rejected
  - Accepted format is a UTF-8 encoded CSV adhering to the schema provided in the repository's documentation
- ✓ States have guidance on how to take the steps to standardize names, dates, and social security numbers to increase the likelihood of matches when there are minor variations in name

#### **Requirements to complete before MVP launch:**

- ☐ FNS-hosted environment should be hosted and made available for states to use for testing
- ☐ Bulk uploads must be able to accept up to 1,000,000 records from each state, daily, for up to 3 states
- ☐ Bulk upload payloads are encrypted by states to prevent misuse if storage accounts are inappropriately accessed
- ☐ Participant ID and PII hash are encrypted in the per-state participants database
- ☐ Participant's vulnerability status / need for location protection is a mandatory field
- ☐ Load tests validate NAC's ability to handle the volume of uploads expected in production:
  - 2 states with 1,000,000 records each
  - 2 states with < 500,000 records each
  - Time needed to perform uploads does not exceed 3 hours
- ☐ The API is extended to provide states with the status of each upload:
  - Whether the data provided in the upload was ultimately accepted or rejected
  - If the upload was rejected, return:
    - Which row(s) prevented the upload from succeeding
    - The reason the row was rejected (example: a required field was missing)
  - Documentation will be updated to accompany the new API features

#### **Limitations that will be in effect at the time of MVP launch:**

- States must exclude participants who do not have sufficient data to participate in the NAC. Documentation guides states to exclude:
  - Participants who are missing any of these required data:
    - First name
    - Last name
    - Social Security number
    - Date of birth
  - Participants who have not yet been certified for benefits.
  - Participants who are no longer receiving benefits. These records should be included through the last day of the participant's final benefit month and excluded from subsequent uploads.
- If any records cannot be accepted, the whole upload is rejected.
- We assume that each state needs only one API key
- \*Final benefit date/participant close date, in the sense that would be useful to the NAC, might not be a data point states can generate.

- \*\*We should assume that no states have actively categorized all participants with the same definition of vulnerable that FNS will provide in the forthcoming rule and subsequent NAC regulations.
- Supported volume of accepted records at this stage will be sufficient for Group 1A states but will not have been tested with volumes needed for nationwide rollout.
- The system does not automatically stop performing matching against states that have not provided bulk uploads recently.
- Prior to rollout to more states, the documentation could use reorganization – feedback from some of the 1A states indicated some challenges finding the information they needed.

## State agencies can conduct matches in the NAC

### User stories:

- As a state agency user, I want the State eligibility system to automatically query the NAC during application / recertification / additions of household members via API so that I can determine if they are getting benefits in another state with as little effort on my part as possible
- As a state agency user, I need to be able to conduct matches in the NAC when someone applies for SNAP benefits so I know if the applicant is already participating in another state.
- As a stage agency user, I want to know when there are no matches so that I can proceed with certifying benefits.
- As a state agency user, I want to know when there are matches because I have to take follow up steps to verify, provide notice, and an opportunity to contest before I certify them for benefits

### Searches performed by API

#### Requirements currently met:

- ✓ Duplicate participation API accepts queries for individuals or entire households to learn if the person is likely to be involved in a case of duplicate enrollment.
  - 1-50 individuals can be searched for in a single query
- ✓ The API accepts the following information about each person included in the query:
  - A secure hash representing the deidentified (last name + SSN + DOB) of the person
- ✓ The API indicates which individuals from the query are not involved in any matches
- ✓ The API returns the following information for every match found:
  - A unique match ID
  - The secure hash representing the participant's deidentified (last name + SSN + DOB)
  - The state matched against
  - The participant ID at the matching state
  - The case ID at the matching state
  - The final benefit date/participant close date\*
  - The last 3 months/dates in which the participant received benefits
  - Whether the participant's location needs to be protected\*\*
- ✓ The API rejects malformed and invalid queries
- ✓ Each time a new match is found, a record is saved that contains
  - A unique ID
  - The participant hash of deidentified PII
  - The states involved in the match
  - Which state initiated the match
  - The matching state's
    - Case ID
    - Participant ID

- Recent benefit months/dates (from the bulk upload records for the matching state)
  - The match status (which defaults to “open”)
  - Whether the match was flagged as invalid (defaults to false)
- ✓ New matches do not duplicate previous matches (partially complete)
  - If an existing, open match exists for the same hash between the same two states, return a link to that match
- ✓ Duplicate participation API returns a unique match ID for each match returned

**Requirements to complete before MVP launch:**

- ☐ The API requires states to provide additional information about each participant in the state performing the search:
  - Case ID
  - Participant ID
- ☐ When match records are created, they should also include:
  - The initiating state’s
    - Case ID
    - Participant ID
    - Vulnerable status (prefilled with the values from the search query)
  - The matching state’s
    - Vulnerable status (from the bulk upload records for the matching state)
  - The date + time when the match was found
  - A time stamp of when each state involved took initial action (defaults to empty)
  - The disposition taken by each state on the match (defaults to empty)
- ☐ Search queries can find multiple matches in the same household
- ☐ New matches do not duplicate previous matches
  - If a previous match for the same hash was closed as invalid, do not create another match
- ☐ New matches are not created for recertifications where the initiating state is the same as the matching state
- ☐ API responses change to provide:
  - A URL that can be used to look up the match in the NAC website

**Limitations that will be in effect at the time of MVP launch:**

- Match records are limited to pairs of states

[Searches performed manually](#)

**Requirements currently met:**

- ✓ Only users with a valid eAuth credential can access the search website
  - User accounts can be associated with specific states
- ✓ The query website accepts these inputs to search for matches involving a single individual, accepting:

- First name
- Last name
- SSN
- DOB

✓ The query website returns the same outputs as the API.

**Requirements to complete before MVP launch:**

- ☐ Query website accepts vulnerability status
- ☐ Query website rejects inputs outside the ASCII character range

**Limitations that will be in effect at the time of MVP launch:**

- Searches through the website for a household must be performed one individual at a time.
- Searches through the website will not ask for the initiating state's Case ID and Participant ID.  
This may cause the matching state to need to use name and date of birth if they initiate the out of state inquiry.

## State agencies can see prior NAC matches and take actions

### **Requirements currently met:**

- ✓ Only users with a valid eAuth credential can access the website to look up prior matches
  - User accounts can be associated with specific states

### **Requirements to complete before MVP launch:**

- ☐ Users with a Match URL link can see the details of a prior match:
  - The unique Match ID
  - Current status of the match (open / closed)
  - When the match was found
  - For each state involved in the match:
    - The state name
    - The Participant ID and Case ID (if available)
    - Recent benefits months
    - Whether or not the individual's location needs to be protected in that state
    - The email address where the state receives out of state inquiries
    - The phone number where the state receives out of state inquiries
- ☐ Invalid match URLs return some form of "page not found" error
- ☐ Users who follow a match URL link when logged out are redirected to the page that they had intended to visit after completing a successful login
- ☐ Users can navigate from a match page to the search page
- ☐ Users viewing a match can edit the following information for their own state:
  - The date when they began taking initial action
  - Whether the match is invalid (yes/no)
  - The disposition selected for the match (eligible/ineligible)
    - When users enter the disposition, the system captures a timestamp
  - Whether the individual is considered vulnerable in their state
- ☐ Users who begin performing edits can cancel and discard the draft changes
- ☐ Users can only edit the match information for their own state
- ☐ When both states have either reported disposition or flagged the match as invalid, the match status changes to closed.
  - When a match is closed, a timestamp is saved

### **Limitations that will be in effect at the time of MVP launch:**

- Users will only access matches by link URL. We assume they won't need to manually search by Match ID. This assumption should be verified with user research.
- We assume that users will sometimes enter information by mistake, but there is not a clearly correct way to handle changes to the match validity or disposition. An initial mistake in those fields would close a match. At MVP, the NAC will not reopen matches once they are closed.
- The NAC will allow states to edit the information associated with closed matches. This allows states to correct data entry mistakes. A future version of the NAC might impose some sort of

limitation that balances the need to allow immediate corrections to mistakes and preventing inappropriate changes months later. An option might like preventing edits 7 days after closing a match.

- Participant vulnerability is captured in both states at the moment the match is found. After that, it is only changed if a worker at either state manually updates the match. It does not automatically update if a worker in either state changes the vulnerability status in their own system.



## FNS can monitor performance of the NAC

### Requirements currently met:

- ✓ Only users with a valid eAuth credential can access the metrics website
  - User management for the metrics website is managed independently of the search / query website. Providing access to the metrics website does not guarantee access to search the NAC and vice versa.
- ✓ The metrics website provides FNS staff with the ability to see the last time when a state has uploaded participant data to the NAC.
  - The metrics website shows how long it has been since each state uploaded participant records
  - The list is ordered to put the states that have taken the longest to update their records first
  - Users can look at the upload history for a state to see the 10 most recent uploads from that state.

### Requirements to complete before MVP launch:

- ☐ Change the way that participant uploads are monitored
  - Enrollment data upload time should be the time when the upload completed successfully, not the time when it was initiated.
  - Failed bulk data uploads should not update the date + time shown to the user
- ☐ Provide metrics on the volume of searches performed by each state
  - Home page gets a new link to a page for "NAC searches"
  - NAC searches page shows this information for each state that is performing searches:
    - Number of searches within the last month (updated at least daily)
    - Number of searches within the last day
- ☐ Provide metrics on the number of matches found
  - Home page gets a new link to a page for "Match statistics"
  - Match statistics page shows total number of matches found each month (updated at least daily)
  - Match statistics page shows, for each state, the number of matches found in the last month involving that state (updated at least daily)
- ☐ Provide metrics on the uptime and latency of search tools under Group 1A usage volume
  - Establish baseline availability for duplicate participation API
  - Establish baseline availability for search website
- ☐ Provide a report on match validity that contains:
  - Total # of closed matches
  - Total # of matches flagged as invalid by either state
  - Calculated match validity (ex. "95% of matches are valid")

### Limitations that will be in effect at the time of MVP launch:

- There will not be visibility into how many searches were performed broken down by case action type (application, additions of household members, or recertifications)
- Information on matches found will not show state trends (for example: number of matches found in MA during March vs. April vs. May). The intent is to prove that matches are steadily found over time and that each state is involved in matches.
- Match validity reports are not broken out by time period. They only provide totals throughout the entire lifetime of the NAC.

## The NAC notifies both states when a match is found

### Requirements currently met:

- ✓ When a match is found, the initiating state is provided notification by the API or website where the search was conducted.

### Requirements to complete before MVP launch:

- ☐ For each state, the NAC stores an email address that will be used to provide notifications to states when matches are found
- ☐ Each time a NAC match is created, the matching state is provided with a notification by email. This email will contain:
  - A unique Match ID
  - A unique match URL that can be used to look up the match status in the NAC website
  - The Case ID and Participant ID for the individual in the matching state
  - The name of the initiating state
  - The Case ID and Participant ID for the individual in the initiating state
  - Whether the individual was flagged as vulnerable in the initiating state

### Limitations that will be in effect at the time of MVP launch:

- Only the matching state will receive an email notification. The initiating state received notification through the same channel where they initiated the search. This should be fine for now, but will need to be modified when bulk matching is performed.

## FNS QC can evaluate states' use of the NAC

Most of the QC team needs will be addressed in the form of recommendations for states that implement the NAC.

### **Requirements currently met:**

- ✓ QC stakeholders can be provided access to the NAC search website and run a match if the eligibility worker did not.

### **Requirements to complete before MVP launch:**

- ❑ Provide recommendations to implementing states to encourage them to produce records that can be easily reviewed in the QC process:
  - Save information to the case file proving that a match was conducted
  - Show the results of the match in the documentation that you save
  - If you produce proof in the form of screenshots, ensure that your system produces a visibly different result for each of these situations:
    - A negative match result
    - A positive match result
    - An individual for whom no match was conducted
  - Provide visual differentiation for each of the required match systems to avoid confusing NAC matches with eDRS or other mandatory data matches.

### **Limitations that will be in effect at the time of MVP launch:**

- QC will rely on state agencies to record proof that matches were run
- States may be required to take screenshots