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# National Patient Information Reporting System: National Data Warehouse

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## **NDW Export Tracking Data Mart**

### **User Guide**

Version 3.0

March 2011



Department of Health and  
Human Services

Indian Health Service

Office of Information  
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# Contents

<b>Version Control.....</b>	<b>iii</b>
<b>Contact Information .....</b>	<b>iii</b>
<b>Introduction.....</b>	<b>1</b>
<b>Process Flow .....</b>	<b>1</b>
<b>NDW Automated Data Export Status Email Notifications.....</b>	<b>2</b>
About the NDW Email Notification List .....	3
NDW Acknowledgement Notification Email.....	4
If the Transmission Status Reads “Errors detected in file” .....	6
If You Don’t Receive Timely ACK Notification.....	7
NDW Post Load Report Email .....	8
<b>Using the NDW Reporting Web Site.....</b>	<b>11</b>
Getting a Copy of Post Data Load Report Error Descriptions.....	11
<b>Using the NDW Export Tracking Web Site .....</b>	<b>12</b>
<b>Viewing Data Export File Information .....</b>	<b>15</b>

## Version Control

Version	Date	Notes
1.0	April 2008	Initial version. FY08 Bridge Contract deliverable, D1.9.3 COTR approved May 14, 2008
2.0	April 2009	Changes due to implementation of Issue 327, Promoter Elimination, and NDW no longer rejects registrations or encounters.  COTR approval April 3, 2009
2.1	March 2011	Begin Annual Review/Update Remove details of using the NDW Reporting Web Site; refer to new NDW Reporting Web Site User Guide. Reworked Process Flow Diagram.
3.0	March 2011	Final

## Contact Information

If you have any questions or comments regarding NDW Export Tracking, please contact the OIT Help Desk at: [support@ihs.gov](mailto:support@ihs.gov).

## Introduction

The National Data Warehouse (NDW) Export Tracking features were developed by NPIRS to provide suppliers of data to the NDW with a means to track the receipt and loading of their files. The features include reports e-mailed to senders, access to the Export Tracking Web Site and, web-based reports in the Export Tracking Mart.

## Process Flow

At the sending site, the source system creates a data export file of patient registrations and/or encounters, and sends the file to the IHS National Data Warehouse (NDW), where the data is loaded into the NDW database.

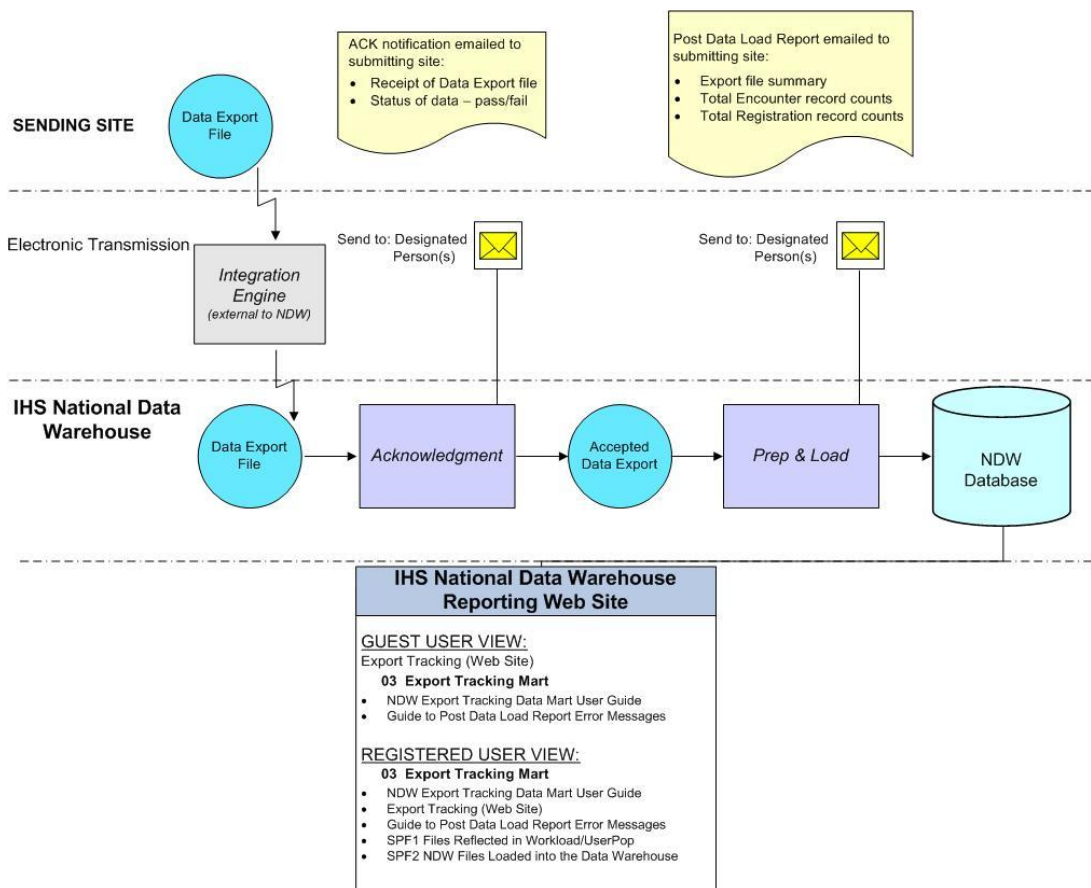


Figure 1 - Data Export Process Flow Diagram

As the figure illustrates,

- There is an Integration Engine (IE) between the sending site and the NDW. This server is not administered as part of the NDW. It serves as a router, forwarding different file types to their proper destination. Currently, the types of data export files that are routed to the NDW include:
  - RPMS and Non-RPMS HL7
  - Structured File Format (SFF)
  - Fiscal Intermediary (FI)
  - Contract Health Services ACHS and CHSSTAT
- When the data export file arrives in the IE's NDW receiving area, it is checked to make sure the data transmission to the IE was successful and the file is complete and readable to that point. The IE sends an e-mail to NPIRS staff for each file indicating success or failure<sup>1</sup>. Failures can either be transmission related (such as data corrupted or cut off) or source related (such as format errors). In the event of failure, NDW staff will alert the sending Site/Area by manual email.
- The successfully transmitted file is sent on to the NDW where it goes through the Acknowledgement process (referred to as ACK) and an automated notification is emailed to designated Site/Area staff.
- Next, the exported data is prepared for loading into the NDW database. After the data is loaded into the database, an automated post-load report is emailed to the designated Site/Area staff.

In addition to the email notifications, information related to data export files is available via the IHS National Data Warehouse Reporting Web Site in the Export Tracking Web Site. The Export Tracking Web Site is dynamic and represents the status of the file at the time of a search event.

## **NDW Automated Data Export Status Email Notifications**

The NDW generates two reports related to the status of the data export file:

- Data Transmission Log Report, or Acknowledgement Notification
- Post-Load Report

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<sup>1</sup> For the NDW to be aware of a transmission failure, at least a portion of the transmission must have reached the IE.

The NDW automatically emails each of these reports to the designated person(s) at the sending Site/Area.

## About the NDW Email Notification List

While the NPIRS staff is responsible for the administration of this list, the currency of the list is the responsibility of the sending sites. To send updates to this list (additions and/or deletions), please send an email to: [NDW-ACKREPLY@ihs.gov](mailto:NDW-ACKREPLY@ihs.gov).

Include the following information:

- Sending Site name(s) and Facility code(s)
- Full name of the person to receive the NDW email notifications
- Email address
- Phone number

## NDW Acknowledgement Notification Email

When the site's data export file arrives in the NDW, it is first checked by the ACK process. The ACK makes sure the file received from the IE was complete and readable and passes more specific checks to determine whether it is accepted or rejected for processing into the NDW. The results of the ACK are sent to the sending site via an automatic e-mail notification, titled "NDW Data Transmission Log Report." Figure 2 is an example of the ACK notification for an accepted file. Please refer to Figure 3 for an example of a rejected file notification.

```

* DATA WAREHOUSE *
NDW Data Transmission Log Report
Data Received Date: Mar 25, 2008

For more information please send an email to: NDW-ACKREPLY@ihs.gov

Export ID: 10113
Export file name: 663510308032408413.BDW
Static ASUFAC of exporting box: 663510
Beginning Date: Feb 26, 2008
Ending Date: Mar 23, 2008
Received by IE Date: Mar 24, 2008
Run Location: GREENVILLE RANCHERIA TRB HLTH
Transmission Status: No errors detected
Total Number of Registrations Received: 420
Total Number of Encounters Received: 1837
    
```

Figure 2 - Example of an accepted file notification.

Also referred to as the "ACK," this report provides the following information on the data export file:

Report Item	Description
Data Received Date	The date the ACK process received the data export file.
Export ID	The unique ID assigned by the NDW to this file.
Export file name	The file name assigned to the data export by the source system.
Static ASUFAC of exporting box	The 6-character facility code that identifies the site that sent the file.
Beginning Date	The earliest Date Last Modified contained in this data export.

Report Item	Description
Ending Date	The latest (most recent) Date Last Modified contained in this data export.
Received by IE Date	The date the Integration Engine received the file
Run Location	The name of the site that sent the file.
Transmission Status	<p>No errors detected (accepted), or Errors detected in file (rejected). A rejected status can be due to</p> <ul style="list-style-type: none"> <li>• Record count discrepancy of 10 or more records</li> <li>• No records found in file</li> <li>• File was previously loaded</li> <li>• Area Code associated with the site cannot be determined</li> <li>• Too many sub-records of a specific type in a record.</li> </ul>
Total Number of Registration Records Received	The number of Registration records counted by the ACK process.
Total Number of Encounter Records Received	The number of Encounter records counted by the ACK process.



## If the Transmission Status Reads “Errors detected in file”

A Transmission Status of “Errors detected in file” indicates that the file is rejected and will not be processed into the NDW. The reason for the reject, the ‘Discrepancy Noted’, is specified at the end of the notification. NPIRS staff will contact the Site/Area for any failure other than “no records” or “previously loaded.”

The following figure displays an example of an Acknowledgement notification for a file transmission that was rejected. In this example, the reject is due to a discrepancy between the encounters total in the file’s trailer record and the total number of encounters received/counted by the NDW.

```

* DATA WAREHOUSE *
NDW Data Transmission Log Report
Data Received Date: Mar 25, 2008

For more information please send an email to: NDW-ACKREPLY@ihs.gov

Export ID: 10111
Export file name: 5562013080321235127.BDW
Static ASUFAC of exporting box: 556201
Beginning Date: Mar 08, 2008
Ending Date: Mar 14, 2008
Received by IE Date: Mar 24, 2008
Run Location: CARL ALBERT HOSP
Transmission Status: Errors detected in file
Total Number of Registrations Received: 1814
Total Number of Encounters Received: 12468

Discrepancy Noted: SENDER ENCTR COUNT EXCEEDS NDW COUNT BY > 10, FILE
REJECTED

Actual P000 count: 12468   Trailer PCC Enctr Qty : 12765

This file has been rejected because of a large difference between the
record count in the trailer record from your system and the physical
count of records the NDW received. Because it could point to something
seriously wrong with the settings at the Site, we will review this
situation, contact the appropriate parties, and seek a resolution.

Discrepancy Noted: SENDER REG+ENCTR COUNT EXCEEDS NDW COUNT BY > 10,
FILE REJECTED

Actual rec count : 14284   Trailer Src Fl Rec Qty : 14581
```

Figure 3 - Example of a rejected file notification.

## **If You Don't Receive Timely ACK Notification**

The person designated as the recipient of the automated NDW Acknowledgement notification should receive an ACK email within 24 hours (during a normal work week) confirming the data export file transmittal. If an ACK email does not arrive within the expected timeframe, the site contact should check the status of the data export file by sending an email inquiry to [NDW-ACKREPLY@ihs.gov](mailto:NDW-ACKREPLY@ihs.gov).

When sending the email inquiry, please include the sending facility code, the export date, and the file name (if known).

## NDW Post Load Report Email

Exports that pass the ACK process are loaded into the NDW. Depending on scheduling, the file may not be loaded on the same day it was acknowledged. After the export data has been loaded into the NDW database, a Post-Load report, titled “NDW Post Data Load Report,” is generated and automatically emailed to the designated person(s) at the sending Site/Area. For example:

<b>IHS NATIONAL DATA WAREHOUSE</b>				
<b>NDW Post Data Load Report</b>				
Load Date: 03/16/2009				
For more information please send an email to: <a href="mailto:NDW-ACKREPLY@ihs.gov">NDW-ACKREPLY@ihs.gov</a>				
Export ID: 14561				
Export File Name: 3536013090316061128.BDW				
Static ASUFAC of exporting box: 353601				
Beginning Date: 10/29/2008				
Ending Date: 03/15/2009				
Run Location: MT. EDGECUMBE HOSPITAL				
Load Status: Exceptions Detected				
Total Number of Encounters Received: 88520				
Total Number of Registrations Received: 13160				
<u>Encounters:</u>	<u>Add</u>	<u>Change</u>	<u>Delete</u>	<u>Rejected</u>
77412		8584	2524	0
<u>Registrations:</u>	<u>Add</u>	<u>Change</u>	<u>Delete</u>	<u>Rejected</u>
669		12491	0	0
<u>Error Description</u>	<u>Field Name</u>	<u>Count</u>		
<b>*** TRANSFORMATIONS ***</b>				
DATA LENGTH EXCEEDS TARGET FIELD LENGTH, NOT STORED	HCPCS / CPT Code	2335		
DATA LENGTH EXCEEDS TARGET FIELD LENGTH, NOT STORED	V A Drug Class Code	17		
INVALID DATE, STORED AS DATE CHAR FORMAT	Date Moved To Community (character format)	205		
INVALID DATE, STORED AS DATE CHAR FORMAT	Eligibility End Date (character format)	43		
INVALID DATE, STORED AS DATE CHAR FORMAT	Eligibility Start Date (character format)	67		
INVALID DATE, STORED AS DATE CHAR FORMAT	Last Menstrual Period (character format)	8311		
PSEUDO SSN SENT, SSN NOT STORED	Social Security Number & Pseudo-SSN Flag	30		

Figure 4 - NDW Post Data Load Report example.

The information in this report should match the ACK report information for the *same* data export file, with the following additions:

Report Item	Description
Load Date	The date that the data was loaded into the NDW database. The actual load date may vary, depending on scheduling.
Load Status	No exceptions or Exceptions Detected. Exceptions can be rejected records or transformations, and both types are listed at the end of the report.
Encounters	<p>The counts of records flagged as added, changed, deleted and rejected. Rejected records are those encounters that were rejected by the NDW during the Prep &amp; Load processes.</p> <p>Currently, all encounters from accepted exports are loaded to the NDW, including those with no matching registration. In the past, encounters without matching registrations would be held separately and checked regularly to see if the required registration had since been loaded.</p> <p>The sum of added, changed, deleted, and rejected counts should equal the Total Number of Encounter Records Received.</p>
Registrations	<p>The counts of records flagged as added, changed, deleted and rejected. Rejected records are those registrations that were rejected by the NDW during the Prep &amp; Load processes.</p> <p>Currently, all registrations from accepted exports are loaded to the NDW. In the past, registrations with inconsistent processing codes (i.e., record says 'Add' but the record already exists in the NDW) were not loaded.</p> <p>The sum of added, changed, deleted, and rejected counts should equal the Total Number of Registration Records Received.</p>
Error Description, Field Name, Count	Any rejected records and/or transformation errors are listed in this section.

Information regarding missing registrations and the unlinked encounters associated with them is available in the Data Quality Mart section of the NDW Reporting Web Site for each specific Site/Area. Refer to the report entitled “DQM-UP3 Missing Registrations by Facility” within your Area’s folder.

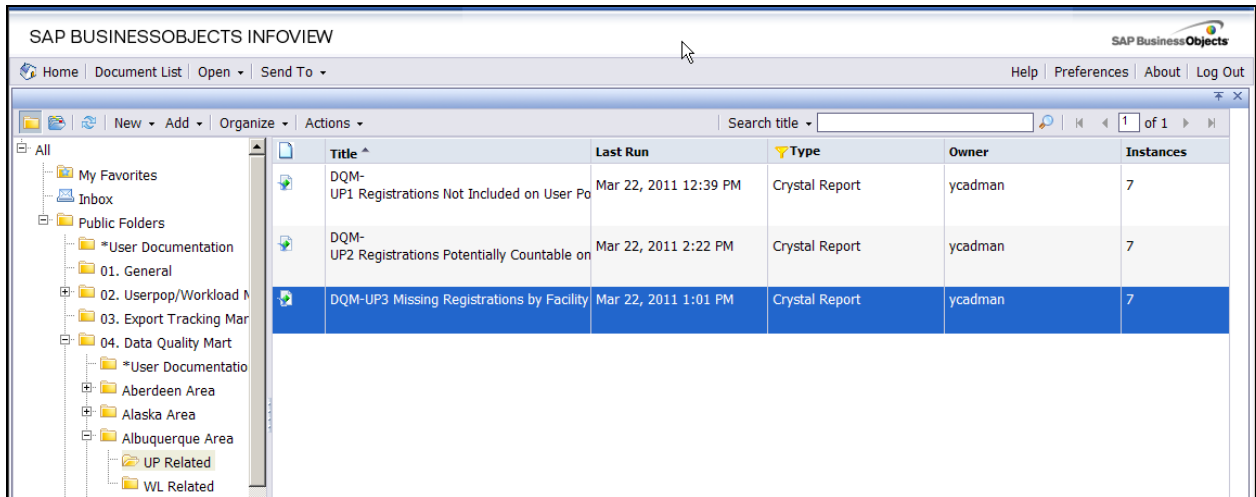


Figure 5 – Location of DQM-UP3 report on NDW Reporting Web Site.

Reports in the Data Quality Mart are only available to registered users of the NDW Reporting Web Site. Contact your Area’s Statistical Officer for this information, or for information on obtaining a registered user account.

For more information related to transformation errors and the appropriate action to take in each case, see the document entitled “*Guide to Post Data Load Report Error Descriptions*” in the Export Tracking Mart folder of the NDW Reporting Web Site. This document is available to all with access to the IHS intranet. Refer to the following section for instructions on accessing the folder.

## Using the NDW Reporting Web Site

User documentation and Export Tracking features are available via the NDW Reporting Web Site (on the ROHAN server) to all who have access to the IHS intranet. Go to <http://rohan> and log on as a Guest. It is recommended that you first review the NDW Reporting Web Site User Guide if you are not familiar with the general workings of this web site.

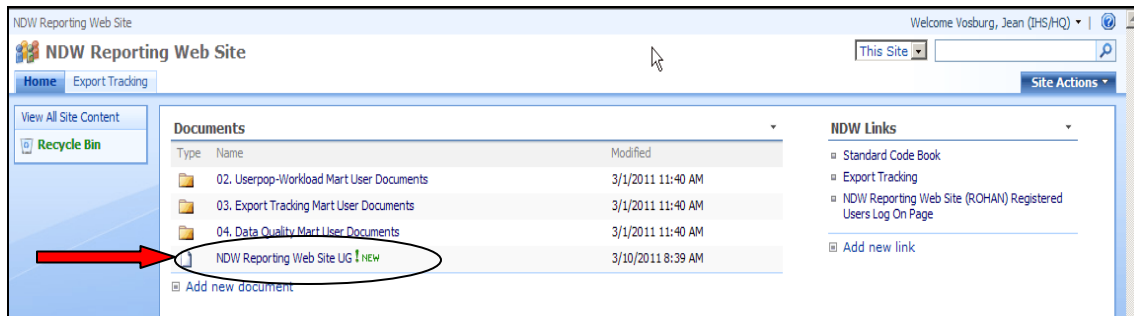


Figure 6 - NDW Reporting Web Site window capture (1).

**Note:** The same documentation and Export Tracking features are available if you choose to log in as a Registered User instead. Double-click on the “03. Export Tracking Mart” folder to find them.

## Getting a Copy of Post Data Load Report Error Descriptions

The bottom of the Post Data Load Report email includes any error messages (Error Description), the Field Name to which the error applies, and the number of times the error occurred (Count). These error messages, along with descriptions of how/why the error occurred and actions to take to correct the error are contained in the “Guide to *Post Data Load Report Error Descriptions*” document.

Log on to the NDW Reporting Web Site as a Guest to access this document.

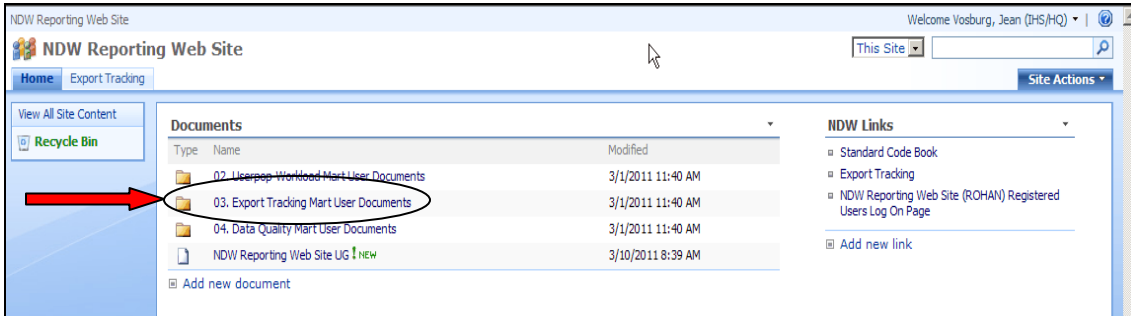


Figure 7 - NDW Reporting Web Site window capture (2).

Double-click on “03. Export Tracking Mart User Documents” to open the folder, as shown in Figure 7, above. Double-click on the document’s title to open the document, as shown in Figure 8, below.

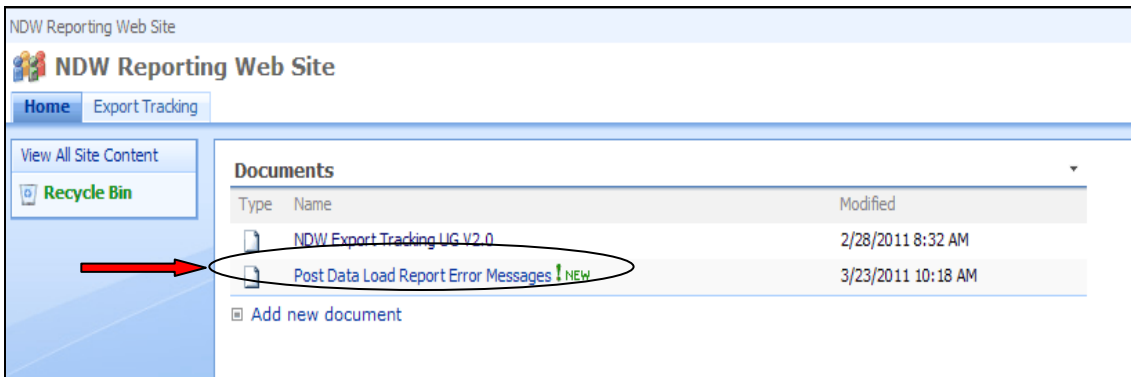


Figure 8 - NDW Reporting Web Site window capture (3).

## Using the NDW Export Tracking Web Site

The Export Tracking Web Site is your source for information related to your data export files based on a set of search parameters.

To access this Web Site, you must first log on to the NDW Reporting Web Site as a Guest User. From the main page of the site, either click the 'Export Tracking' tab at the top of the page or select the 'Export Tracking' hyperlink at the far right.

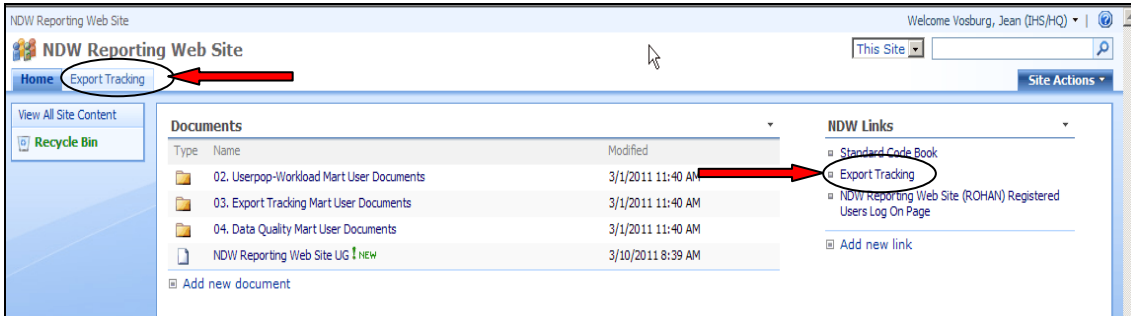


Figure 9 - NDW Reporting Web Site window capture (4).

The NDW Export Tracking Web Site, as shown in Figure 10, will be displayed.

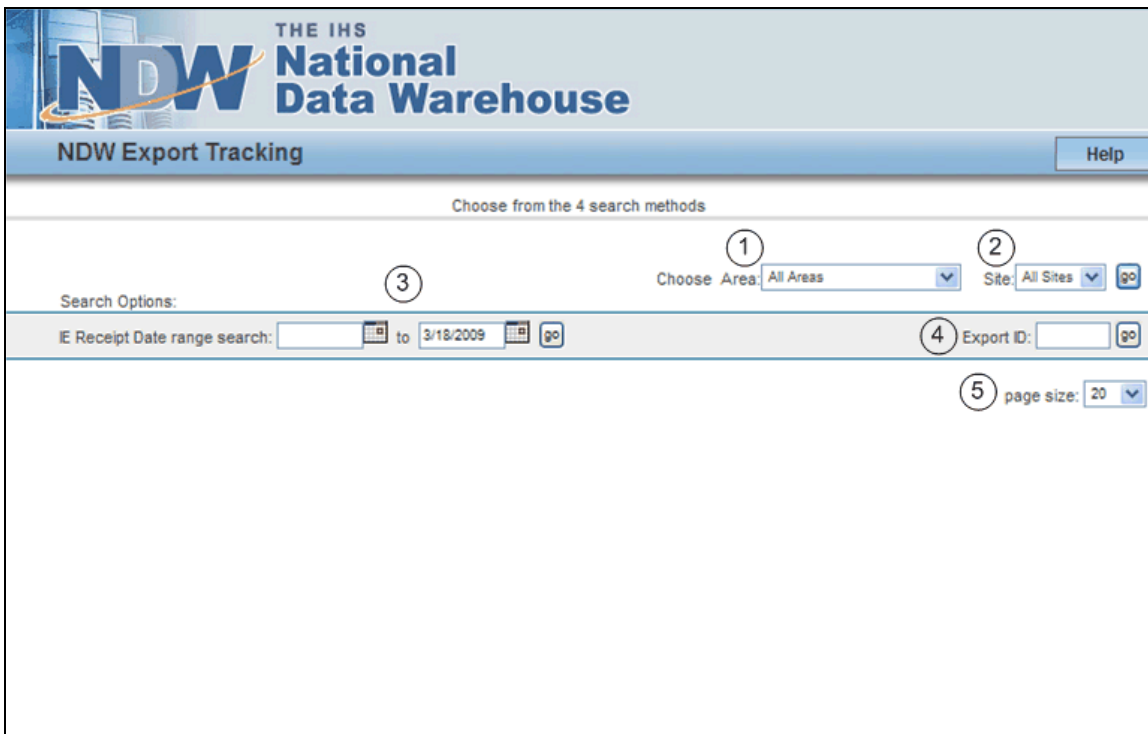


Figure 10 - NDW Export Tracking Web Site.



The primary search option is the Area, then a Site within an Area. Additionally, you can specify a “Received by IE Date Range” and/or the Export ID assigned to a specific data export file.

Item	Description
1, 2	<p>Use <b>Choose Area</b> to select and display the export data files for All Areas and All Sites (default) or a specific Area and All Sites or a specific Site. The Fiscal Intermediary option displays all the Fiscal Intermediary (FI) files received by the NDW.</p> <p>Use <b>Site</b> to restrict the search to All Sites or a specific Site within an Area.</p> <p><b>Note:</b> All searches are based first on the Site/Area selections.</p>
3	<p>Use the <b>IE Receipt Date range</b> to limit a Site/Area search to export data files within a specified date range. These dates are the “Received by IE Date” on the ACK and Post Load report emails.</p> <p>You can use the calendars to select the dates.</p>
4	<p>Use the NDW <b>Export ID</b> assigned to a specific data export file to display only that data export file’s information. The Export ID is reported on the ACK and Post Load report emails.</p> <p>If specifying an Export ID, All Areas and All Sites search options must be selected and the date range must include the file’s IE Receipt Date.</p>
5	<p>Use the <b>page size</b> to limit the number of export files displayed on a page, from 10 to 100 per page. The default is 20.</p>

The NDW Export Tracking web site was designed to work in Microsoft Windows® Internet Explorer®. If you use a different browser, you may need to click the “go” button to execute the search options.

## Viewing Data Export File Information

Figure 11 shows the list of export files received between March 8-9, 2009 from all Areas and sites.

The screenshot shows the NDW Export Tracking interface. At the top, there is a header for 'THE IHS National Data Warehouse' and 'NDW Export Tracking'. Below this, there are search options including 'Choose Area: All Areas' and 'Site: All Sites'. A search range is set from '03/08/2009' to '03/09/2009'. The results table shows 11 files with the following data:

Area	Export ID	ASUFAC	File Name	First/Last Mod Dates	Ack'd Loaded	Registration Reg Loaded	Encounter Enctr Loaded
POR	14524	757576	757576309030915545.BDW	F- 1/5/2009 L- 3/8/2009	A-03/09/2009 L-03/10/2009	146	5035
NSA	14523	510000	chsstat510000a.09068	F- N/A L- N/A	A-03/09/2009 L-03/10/2009	0	209
BJI	14522	183430	1834303090301071526.BDW	F- 2/2/2009 L- 2/28/2009	A-03/09/2009 L-03/10/2009	48	765
BJI	14521	183430	1834303090201071525.BDW	F- 1/12/2009 L- 1/31/2009	A-03/09/2009 L-03/10/2009	21	401
BJI	14520	183430	1834303090112142404.BDW	F- 1/1/2009 L- 1/11/2009	A-03/09/2009 L-03/10/2009	0	182
BJI	14518	183430	1834303081201071524.BDW	F- 11/1/2008 L- 11/30/2008	A-03/09/2009 L-03/10/2009	51	443
BJI	14517	183430	1834303090101071527.BDW	F- 12/1/2008 L- 12/31/2008	A-03/09/2009 L-03/10/2009	16	753
PHX	14516	600031	6000313090309092653.BDW	F- 2/11/2009 L- 3/8/2009	A-03/09/2009 L-03/10/2009	173	53
NSA	14515	585101	5851013090308033519.BDW	F- 2/23/2009 L- 3/7/2009	A-03/09/2009 L-03/10/2009	1729	12903

Figure 11 - NDW Export Tracking display.

Item	Description
1	<p><b>Results</b> message indicates the total number of files found within the Date Range search options.</p> <p>When the results equal more than the selected page size, page numbers are displayed at the bottom of the current display. To move from page to page, click the next page number at the bottom of the list.</p> <hr/> <p><b>Note:</b> Clicking “reset” displays all files received from all Areas and all sites.</p>

Item	Description
2	The <b>Area</b> column displays the 3-character Area code from which the file was sent.
3	The <b>Export ID</b> displays the unique number assigned to the data export file by the NDW. This number appears on the ACK and Post-Load Report emails.
4	The <b>ASUFAC</b> column displays the 6-character numeric code of the site from which the file was sent, and labeled “Static ASUFAC of exporting box on the ACK and Post Data Load Report emails.
5	<p>The <b>File Name</b> is the name of the file sent from the Area/ASUFAC and labeled “Export File Name” on the ACK and Post Data Load Report emails.</p> <hr/> <p><b>Note:</b> Any File Name displayed in red font, preceded by an <b>R</b>, indicates that the file was rejected, and the ACK email for such a file specifies why the file was rejected.</p>
6	The <b>First/Last Mod Dates</b> column displays two dates; where the date preceded by F- is the Date Last Modified begin date, and the date preceded by L- is the Date Last Modified ending date for the listed data export file, when such dates are available. These dates correspond to the “Beginning Date” (F-) and the “Ending Date” (L-) specified on the ACK and Post Data Load Report emails.
7	The <b>Date Acknowledged Loaded</b> column displays two dates; where the date preceded by A- is the Received by ACK date specified on the ACK email, and the date preceded by L- is the Load Date specified on the Post Data Load Report email, for the listed data export file.
8	<p>The <b>Registration</b> column displays the number of registrations that were loaded to the NDW for the listed data export file.</p> <p>The ‘Reg Loaded’ count corresponds to the sum of Registrations added, changed and deleted on the Post Data Load Report emails.</p>
9	<p>The <b>Encounter</b> column displays the number of encounters that were loaded to the NDW for the listed data export file</p> <p>The ‘Enctr Loaded’ count corresponds to the sum of Encounters added, changed and deleted on the Post Data Load Report emails.</p>

Figure 12 is an example of a rejected file. If the file is later reviewed and determined to be valid, it will subsequently be loaded into the NDW and will display without the highlight and notation.

The screenshot displays the 'NDW Export Tracking' interface. At the top, it says 'THE IHS National Data Warehouse'. Below this is a navigation bar with 'NDW Export Tracking' and a 'Help' button. The main content area shows search filters: 'All Sites from All Areas', 'Choose Area: All Areas', and 'Site: All Sites'. Search options include 'IE Receipt Date range search: 11/13/2008 to 02/18/2009' and 'Export ID:'. The results section shows 'Results 1 - 1 for Export ID 14545' with a 'page size: 20' dropdown. A table below contains one entry for a rejected file.

Area	Export ID	ASUFAC	File Name	First/Last Mod Dates	Ack'd Loaded	Registration		Encounter	
						Reg Loaded	Enctr Loaded		
PHX	14545	600062	6000623081113141813.BDW	F- 10/15/2008 L- 11/12/2008	A-03/12/2009 L-				

Figure 12 - Example of an export file that has been rejected.