



ZeroMovers™ NCOA API Q&A and Data Dictionary

What is National Change of Address (NCOA) and what are its Benefits?

National Change of Address (NCOA) is a database and processing service offered by the U.S. Postal Service™ that includes a dataset of about 160 million permanent change-of-address (COA) records. The data comes from change of address forms (physical cards or online) people or businesses fill out when they move and goes back 48 months.

The primary benefits of NCOA processing are:

- **Better Postal Mail Delivery** - since 1% of U.S. residents move each month, unless you regularly check your mailing audience for move updates, your mail may not be delivered. While first class mail may be forwarded, standard mail will not be forwarded.
- **Cost and Time Savings** - undelivered mail is a waste of money. Correcting returned mail one by one is a cumbersome process...better to start off with the correct address.
- **Customer Retention** - if NCOA is not performed on a regular basis, you can lose touch with customers that have moved, increasing the likelihood of customer churn.
- **Accurate Proximity to a Store or Location** - if you are seeking to reach people who live near a physical location, up-to-date address information is critical.

What sets ZeroMovers Apart?

Because ZeroMovers is available as an API, it can easily be added inline to data automation processes rather than using batch processing of CSV files.

In addition to matching names and addresses to the NCOA database and returning the most current address, ZeroMovers also performs address standardization using official U.S. Postal Service address formats and provides codes for vacant and undeliverable addresses.

ZeroMovers is available as an API and also as a batch process on the InboundInsight.io platform.

When processing names and addresses using InboundInsight.io we automatically correct and update addresses and return the clean and current information. We also flag addresses as vacant or undeliverable so you can remove these from your mailing, saving the expense and hassle of dealing with returned mail.

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ZeroMovers API Output Fields

Field	Description
output_address_line_1	Current or updated primary/street address
output_address_line_2	Current or updated apartment or unit
output_city_name	Current or updated city
output_state_code	Current or updated 2-letter state abbreviation
output_postal_code	Current or updated 5-digit ZIP Code for the address
output_postal_code_extension	Current or updated +4 Code for the address
output_address_status	Indicates if an address is valid or not, where: M = Multi match (typically missing a prefix or suffix); N = Invalid address with no match to USPS database; Y = Valid match to USPS database
output_address_type	Identifies the different type of delivery addresses where: F = ZIP+4 match on company name; G = General delivery records; H = High rise record; P = PO Box record; R = Rural route record; S = Street record
output_error_number	Error and warning codes that identify DPV issues that may be hindering delivery (see DPV Codes Table)
output_latitude	latitude calculated by ZIP Code centroid (NOT based on the street address)
output_longitude	Longitude calculated by ZIP Code centroid (NOT based on the street address)
output_match_flag	M = Moved; G = PO Box Closed; K = Moved, left no forwarding address; F = Moved to a foreign country
output_move_applied	The date of NCOA processing in YYYYMMDD format (updated weekly)
output_move_date	The date the move was filed with the USPS in YYYYMM format
output_move_distance	Distance in miles from old address ZIP Code centroid to new address ZIP Code centroid
output_nxi	Identifies if a new address was provided and give a description of why or why not (see NXI Codes Table)
output_record_type	A = Active good address with no move found in the COA database; C = Current/ new address based on a move per the COA database; H = Historical or old address (moved with no forwarding address given)
output_residential_delivery_indicator	Indicates whether delivery type is classified as Residential or Business: B = Business; Y = Residential
output_vacant	Indicates if an address is vacant or not, where N = Occupied; Y = vacant for 90+ days

DPV Codes Table

GROUP	CAPTION	DESCRIPTION
1	State Not Found	1.1 State not found
2	City Not Found	2.1 City not found
3	Street Not Found	3.1 Street not found
4	Address Not Found	4.1 Address not found
5	Can't Assign +4	5.1 Incomputable +4 range; 5.2 +4 unavailable
6	Multiple Matches	6.1 Multiple streets match; 6.2 Multiple addresses match; 6.3 Cardinal Rule multiple match
7	Time/Space Error	7.1 Time ran out; 7.2 Output too long
8	Company Warning	8.1 Company phonetic match used; 8.2 First company match used
9	State Corrected	9.1 State determined from city; 9.2 State determined from ZIP
10	City Corrected	10.1 City phonetic match used; 10.2 City determined from ZIP; 10.3 Acceptable city name used
11	Street Corrected	11.0 Address component Chg/Del/Add; 11.1 Street phonetic match used; 11.2 Pre-direction dropped; 11.3 Pre-direction added; 11.4 Suffix dropped; 11.5 Suffix added; 11.6 Post direction dropped; 11.7 Post direction added; 11.8 Pre-direction standardized; 11.9 Street standardized; 11.10 Suffix standardized; 11.11 Post direction standardized; 11.12 Street missing; 11.13 Alternate address used; 11.14 Address Standardized; 11.15 Dual address - Used PO Box; 11.16 Dual address - Used Non-PO Box; 11.17 Street Alias match - Better delivery address exists
12	Unit/Box Warning	12.1 Unit standardized; 12.2 Unit missing; 12.3 Unit not found; 12.4 Unit unverified; 12.5 Rural box not found
13	Leftovers Found	13.1 Leftovers found
14	ZIP/Route Warning	14.1 No ZIP Code Available; 14.2 Incorrect ZIP Code was changed to correct ZIP; 14.3 +4 changed; 14.4 Route changed; 14.5 +4 added; 14.6 Route added; 14.7 ZIP assigned for Multi-matched address; 14.8 Unique ZIP match; 14.9 Small town default match
15	Address Type Warning	15.0 ZIP Code Changed; 15.1 Highrise Default; 15.2 Highrise Exact; 15.3 Rural Route Default; 15.4 Rural Route Exact; 15.5 Early Warning System match; 15.6 LACSLink Conversion Match; 15.7 SuiteLink Match - Suite Returned; 15.8 SuiteLink Match - No Suite Returned
A1-A10		This indicates which Address block was used to code the record

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NXI Codes Table

CODE	CAPTION	DESCRIPTION
A	Full Address Match	Matched record and a new address has been provided.
0	No Matching Address - No new address provided	No Match
1	New address outside US - no new address provided	Found COA: Foreign Move - The input record matched to a business, individual or family type master file record but the new address was outside USPS delivery area.
2	No forwarding address	Found COA: Moved Left No Address - The input record matched to a business, individual or family type master file record and the new address was not provided to USPS.
3	Closed PO box - No new address provided	Found COA: Box Closed No - The Input record matched to a business, individual or family type master file record which contains an old address of PO BOX that has been closed without a forwarding address provided.
4	Address 2 Missing for family move - No new address provided	Cannot match COA: Street Address with Secondary - The input record matched to a family record type on master file with an old address that contained secondary information. The input record does not contain secondary information. This address match situation requires individual name matching logic to obtain a match and individual names do not match.
5	Too many matches - No new address provided	Found COA: New 11-digit DPBC (Delivery Point Barcode) is Ambiguous - The input record matched to a business, individual or family type master file record. The new address on the master file record could not be converted to a deliverable address because the DPBC represents more than one delivery point.
6	Partial Match - No new address provided	Cannot Match COA: Conflicting Directions: Middle Name Related - There is more than one COA (individual or family) record for the match algorithm and the middle names or initials on the COAs are different, so a single match result could not be determined.
7	Partial Match - No new address provided	Cannot Match COA: Conflicting Directions: Gender Related - There is more than one COA (individual or family type) record for the match algorithm and the genders of the names on the COAs are different, so a single match result could not be determined.
8	Too many possible matches - No new address provided	Cannot Match COA: Conflicting Instructions - The input record matched to two master file (business, individual or family type) records. The two records in the master file were compared and due to differences in the new address, a match could not be made.
9	Family move address does not match individual name - No new address provided	Cannot Match COA: High-rise Default - The input record matched to a family record on the master file from a High-rise address ZIP+4 coded to the building default. This address match situation requires individual name match logic to obtain a match and individual names do not match.
10	Family move address does not match individual name	Cannot Match COA: Rural Default - The input record matched to a family record on the master file from a Rural Route or Highway Contract Route address ZIP+4 coded to the route default. This address situation requires individual name matching logic to obtain a match and individual names do not match.
11	Only last name was matched - No new address provided	Cannot Match COA: Individual Match: Insufficient COA Name for Match - There is a master file (individual or family type) record with the same surname and address but there is insufficient name information on the master file record to produce a match using individual matching logic.
12	Middle name does not match - No new address provided	Cannot Match COA: Middle Name Test Failed - The input record matched to an individual or family record on the master file with the same address and surname. However, a match cannot be made because the input name contains a conflict with the middle name or initials on the master file record.
13	Gender does not match - No new address provided	Cannot Match COA: Gender Test Failed - The input record matched to a master file (individual or family) record. A match cannot be made because the gender of the name on the input record conflicts with the gender of the name on the master file record.
14	Undeliverable Address - No new address provided	Found COA: New Address Would Not Convert at Run Time - The input record matched to a master file (business, individual or family type) record. The new address could not be converted to a deliverable address.
15	First name is missing - No new address provided	Cannot Match COA: Individual Name Insufficient - There is a master file record with the same address and surname. A match cannot be made because the input record does not contain a first name or contains initials only.
16	No matching apt number - No new address provided	Cannot Match COA: Secondary Number Discrepancy - The input record matched to a street level individual or family type record. However, a match is prohibited due to: 1) There is conflicting secondary information on the input and master file record; 2) the input record contained secondary information and matched to a family record that does not contain secondary information. In item 2, this address match situation requires individual name matching logic to obtain a COA match and individual names do not match.
17	First name doesn't match - No new address provided	Cannot Match COA: Other Insufficient Name - The input record matched to an individual or family master file record. The input name is different or not sufficient enough to produce a match.
18	Family move with General address - No new address	Cannot Match COA: General Delivery - The input record matched to a family record on the master file from a General Delivery address. This address situation requires individual name matching logic to obtain a match and individual names do not match.
19	No Zip Code found - No new address provided	Found COA: New Address not ZIP+4 coded - There is a change of address on file, but the new address cannot be ZIP+4 coded and therefore there is no 11-digit DPBC to store or return.
20	Cannot determine single address - No new address	Cannot Match COA: Conflicting Directions after re-chaining - Multiple master file records were potential matches for the input record. The master file records contained different new addresses and a single match result could not be determined.
66	Deleted address with no forwarding address.	Daily Delete - The input record matched to a business, individual or family type master file record with an old address that is present in the daily delete file. The presence of an address in the daily delete file means that a COA with this address is pending deletion from the master file and that no mail may be forwarded from this address.
91	Matched; secondary address may be missing	Found COA: Secondary Number dropped from COA. The input record matched to a master file record. The master file record had a secondary number and the input address did not. A new address was provided.
92	Matched; secondary address may be incorrect	Found COA: Secondary Number Dropped from input address. The input record matched to the master file, but the input address had a secondary number and the master file record did not. The record is a ZIP + 4* street level match. New address provided.

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