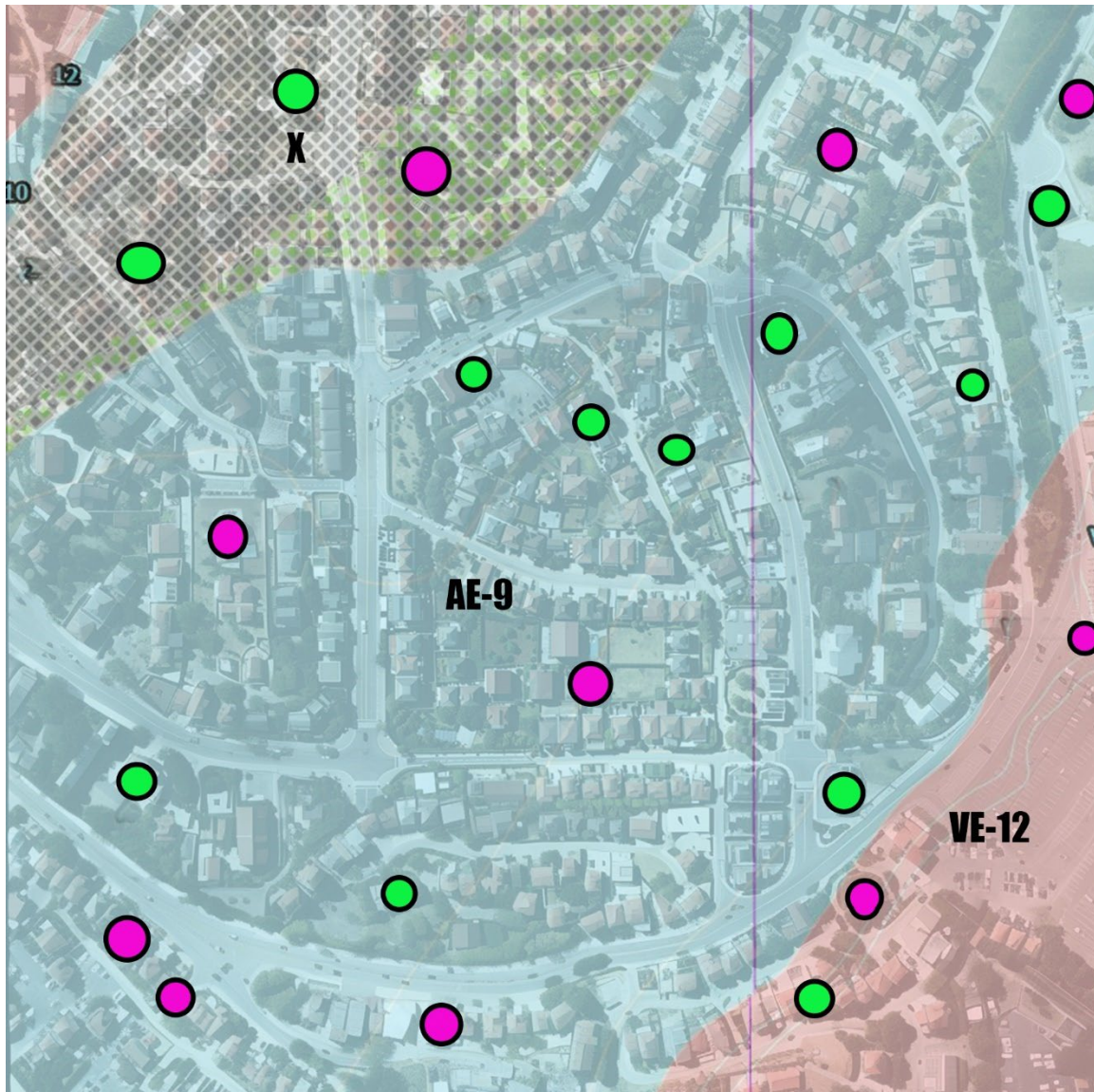# Analyzing Your NVT using GIS

Ver. I.0 – April 2024
Scott G. Fraser, CFM – scott@scottfraser.org



## A Quick-Start Guide for the Uninitiated

A step-by-step guide showing one floodplain manager's approach of using GIS to analyze, report and track its list of supposed floodplain violations appearing on FEMA's new National Violations Tracker (NVT). The author is fully responsible for this content, which isn't endorsed by any governmental agency. Anyone is free to duplicate and share this content when in the interest of improved floodplain management. The map appearing on the cover represents a fictional neighborhood created using artificial intelligence.

Acknowledgments: The ESRI® suite of standard applications was utilized to map. Analyze, track, and share this data: ArcGIS Pro, Arc Dashboard, ArcGIS Online.

GIS Tech: Example schema available on ArcGIS Online and github.com

About the author:

Scott Fraser, CFM continues in his 15th year of floodplain management having served two Florida coastal communities. He's served as a Floodplain Administrator, CRS Coordinator, Code Compliance Officer for floodplain violations, FEMA liaison and led community disaster damage assessment efforts. Trained by ESRI during 2015, his efforts combining GIS with floodplain management and damage assessment operations have been published and experience utilized to beta test new disaster recovery GIS solutions.

## Revision History

| Version | Date | Revision Description |
|---|---|---|
| 1.0 | 4/11/2024 | Release |
| 1.1 | | |
| | | |

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**Contents**

# 1. Introduction

During late 2023, FEMA created within the National Flood Insurance Program (NFIP) its new National Violations Tracker (NVT) by consolidating four separate internal databases of structures within Special Flood Hazard Areas suspected of having floodplain violations. Those separate databases were:

- Minus-rated policy data from PIVOT (formerly known as "submit-for-rate")
- Letters of Map Change (LOMC)
- CRS Annual Elevation Certificate recertification reviews
- Community Assistance Visit (CAV) & Community Assistance Contact (CAC) findings (more commonly referred to as FEMA audits)

Also created within the NFIP was the CRS Discount Exclusion List (CDEx) within the NFIP's PIVOT system. While they are somewhat interconnected the exact relationship between the two isn't clear. What's presently known is that clearing a property from one list doesn't automatically clear it from the other.

Upon learning of the NVT's existence, this community discovered some 1,931 structures within its jurisdiction were listed as presumed floodplain violations. The list contains confidential personally identifiable information protected under the federal

Privacy Act of 1974. Authorized agencies may request this data from FEMA under individual ISAA agreements.

GIS was quickly determined the best method of sorting, triaging and assembling the anticipated 20,000-40,000 pages of supporting documentation. The added advantage with GIS was the ability to spatially locate each listing, immediately associate them with related supporting documentation such as: Elevation and Floodproofing Certificates, LOMAs, demolition permits, proper jurisdiction, property records, 1316 Declarations, mobile home parks, flood zones present and past, along with providing a real-time progress dashboard.

As yet, we await guidance from FEMA regarding reporting format requirements. Absent submission guidelines, this community opted to make quarterly secure digital online fully GIS mapped submittals using ESRI's ArcGIS mapping platform. As such, the data ready for FEMA review appears in real-time.

# Purpose

The intent of this publication is to serve as a helpful tool for other communities faced with having to analyze their own NVT data and methods of deploying GIS technology to do so with ease. Also, to share tips learned along the way that others may find useful. It's not intended as a GIS instructional guide and assumes the reader either has such skills or coordinates closely with those who do.

# Naming Supporting Document Files

Clearing listed buildings from the NVT, whether compliance has been achieved or the violation never existed, requires a wealth of supporting documentation. GIS allows for document attachments to each point on a map. One has but to click on a point, which activates an informational pop-up window, with links to any documents attached. Typically, these attachments are pdf documents and photographs.

While a file naming format isn't necessary for GIS purposes, there may come a need to export all the documentation to some other media. If all the attachments to a

specific listing begin with the same precursor, it'll be much easier to keep them sorted. In this instance the property parcel number was the precursor to every attachment's file name. It could just as easily have been FEMA's violation number found in the NVT data or some other common identifier.

Additionally, the remainder of the file names were descriptive to easily show their relevance without having to open each file.

> Xxxx_Property card.pdf
>
> Xxxx_FC EC.pdf – finished construction phase elevation certificate
>
> Xxxx_FP.pdf – floodproofing certificate
>
> Xxxx_PA photo – Property Appraiser's photo
>
> Xxxx_PA sketch - Property Appraiser's building usage sketch
>
> Xxxx_LOMA – FEMA Letter of Map Amendment
>
> Xxxx_No_Rise_Certificate – self-explanatory

# NVT Data Limitations

Two shortcomings with the NVT data provided will hamper your analysis:

1. Date: When the supposed violation was identified isn't included. If an Elevation Certificate for a relatively new structure appears compliant or the lot is vacant, the offending building may have been a previous structure. Your local demolition permitting archives will be key to resolving these issues.
2. Parcels with multiple structures. The street address listed on the NVT frequently doesn't identify a building beyond its street number. Unless you're able to spot an identifier, it may be very difficult to determine to which structure a 'violation' was attributed. In such instances, these were categorized and reported back to FEMA as "Location Unknown."

# Data Security

It's imperative your GIS staff understand this data must be secured within its own organizational ArcGIS group with access strictly limited to staff with a direct need-to-

know. If not, any GIS user within the organization may unwittingly access the data. Unauthorized sharing of personally identifiable NFIP data is a crime. Generalized reports can be created to satisfy the needs of officials and the general public.

# GIS Prerequisites

<u>Land Parcel Data</u>:  This analysis began with merging the local property appraiser's data – or other local property taxing authority - with that of the NVT. It helps to have all the data fields from both databases fully merged into a single GIS layer so each NVT listing then includes all the property parcel data. Unneeded fields can be hidden. Should that hidden data later prove necessary, it'll be much easier to make it visual again than to add it.

<u>Flood Certificates</u>: It's critical to have an updated layer that at least indicates such documents exist for any given building. Ideally, the GIS data would have fields already populated with data from the certificates with attached copies of those documents to each GIS point. Absent that luxury, you'll at least need a point placed at locations showing such a document exists for that parcel, so you'll be aware this reference is available and to perform GIS queries; a separate point is needed for each document type.

Type of certificates you'll need to know exist at any given location include:
- Elevation Certificates (finished construction)
- Floodproofing certificates
- LOMAs
- Section 1316 Determinations
- Substantial Damage Determinations
- Demolition permits (not essential, but very useful)
- Active floodplain related code enforcement cases

<u>GIS Layers</u>
- Municipal Boundaries: Will easily identify any out-of-jurisdiction locations.
- Historical aerial imagery / NOAA post-disaster imagery
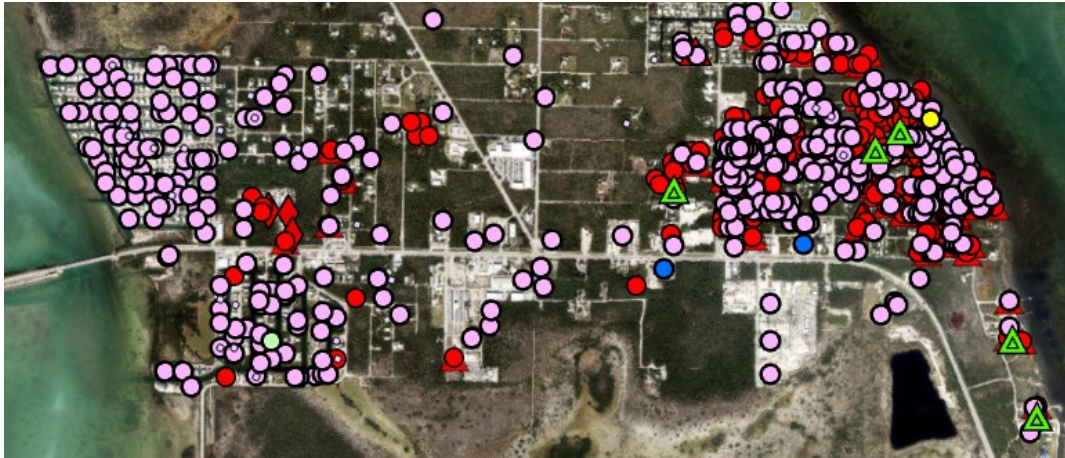- Historic FIRMs

*Figure 1 This GIS map example shows spatially located elevation certs, floodproofing certs, LOMAs, substantially damaged buildings, 1316 Declarations.*

> Auto-plotting points in bulk tends to place them all at the parcel's dead-center. This can cause points to become stacked under each other and hidden from view. It helps to employ an offset, so the points remain within the correct parcel but not under each other.

Expect placement and comparison errors. The decimal degree lat/lon coordinates accompanying the NVT data is accurate down to six decimals. Comparison errors can be minimized by modifying the addresses in the NVT data to better resemble the address format used by your Property Appraiser. For example, if the NVT address is "123 Main Street" but your Appraiser's data shows "123 Main St", before the merge, modify the addresses in your NVT spreadsheet by replacing the word "Street" with "St." etc. and the same for other roadway types.

A very common disconnect occurs with NVT addresses that use the postal city rather than the jurisdiction in which they're physically located. The GIS layer should include columns for both "City" and "Postal_City" to distinguish between the two.

Mobile home parks present geolocating challenges, as do other properties where multiple structures share a common street address and some subset of location
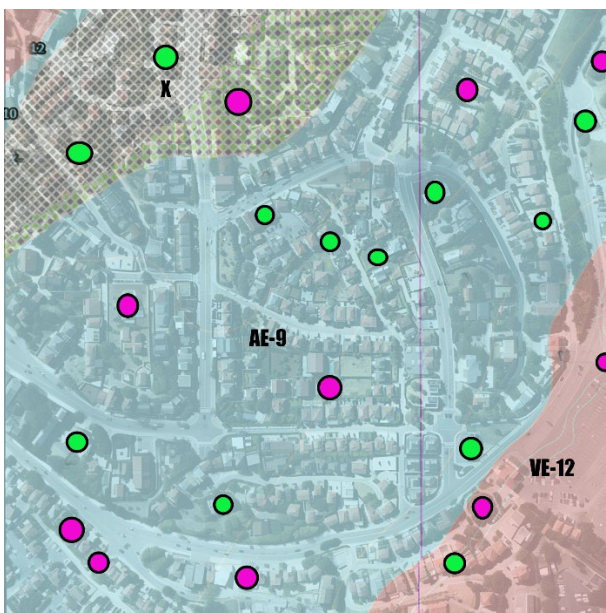
identifier. Mobile home parks are often located within a single parcel. If the lots aren't individually owned, they won't merge properly with taxing databases. In such scenarios, the GIS points may stack atop each other near the park's entrance and need to be manually placed.

# 2. Overview

The beginning goal is to bring all the relevant data down to the property parcel level, which by now would have been merged with the NVT data. This will enable queries, such as…" Which parcels have both an NVT listing and a Floodproofing Certificate."

After checking a series of basic bulk identifiers – out of jurisdiction, pre-FIRM, floodproofed buildings, mobile home parks, demolished buildings etc. – you'll be looking to spot trends which may help identify groups of similarly situated NVT listings that can be successfully resolved. Years earlier, this community had a series of enclosure inspections, with those locations now appearing on the NVT. Document from those prior inspections is expected to cure many of the NVT listings. Mapping those prior inspections into GIS greatly assisted the review; so too did the mapping of floodplain related code enforcement cases.

As you resolve the individual NVT listing, those points will change color, easily distinguishing between what's finished and which remain. In this example, the green points have been vetted, categorized and/or resolved; with review still needed for the purple NVT points.

Duplicating the NVT layer and filtering it to only show those which remain unfinished [using GIS definition query] makes it much easier to focus on the tasks at-hand. It's a different visual copy of the same layer, so all your entries in either will be in the same records.

The bulk of your NVT listings will have a "violation source" of "minus-rated;" formerly known as submit-for-rate. A few may show "LOMC" and a related case number, where violations were detected from a Letter of Map Change application.

Creating a related GIS Dashboard provides a real-time progress report useful for keeping others updated and rendering reports to FEMA. Once such a dashboard has been setup, it'll be self-updating as changes are made to your NVT data. More about dashboards later.
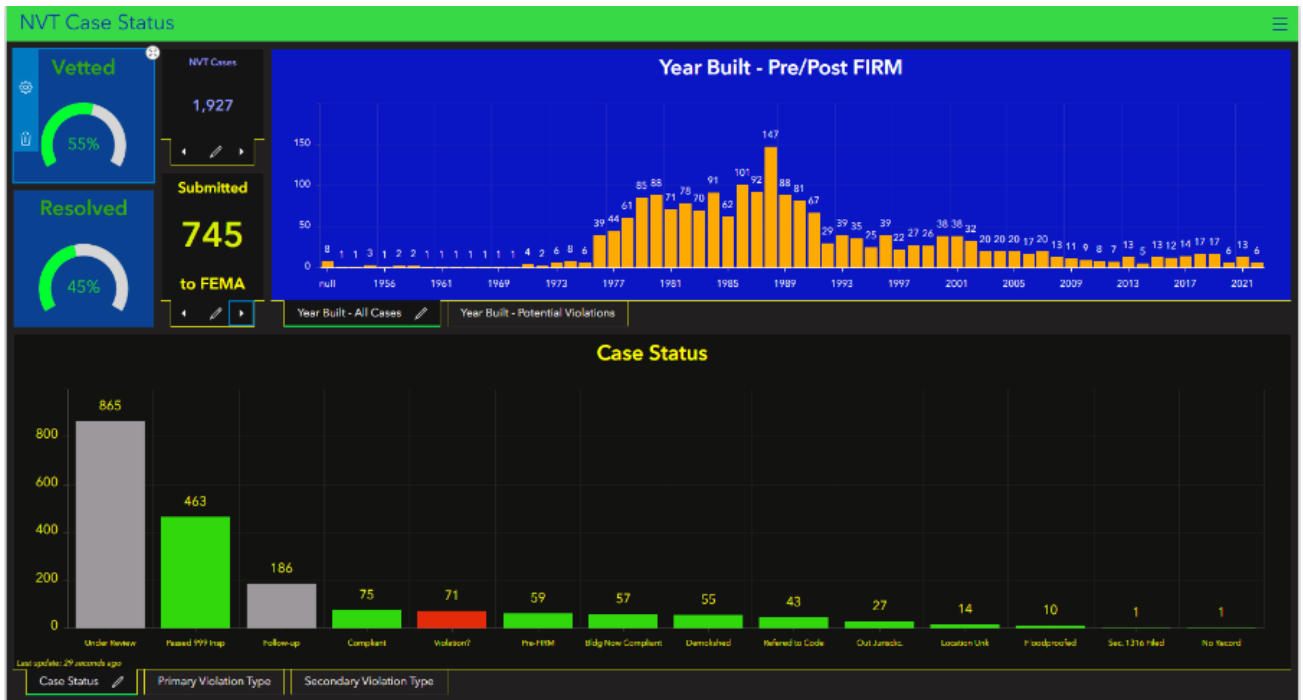


# 3. Where to Begin

## Out of Jurisdiction

Once spatially located, these will be the easiest to spot. Categorize accordingly and note the appropriate NFIP community in the "Comments" field. Including that community's NFIP community number will likely expedite the entry at FEMA.

# Pre-FIRM Buildings

Whether a building is pre- or post-FIRM depends upon the date of the building permit application. However, property tax agencies frequently use the year the Certificate of Occupancy was issued as the construction date. The NVT also uses the taxing agency's year of completion, which can sometimes incorrectly label a building as post-FIRM, minus-rated and an NVT violation. The same can occur with construction dates close to FIRM updates, where they were permitted under the older FIRMs but completed after new FIRMs became effective.

 Check all NVT listings showing a built date within a couple of years after the pre-FIRM date. Where your research shows the permit application was made pre-FIRM, change the year-built date to the application year and attach dated copies of the building permit application and categorize as "pre-FIRM."

Exclude any structures with post-FIRM alterations that would have triggered floodplain compliance.

# Floodproofed Buildings

Floodproofed buildings are a common source for buildings being inappropriately listed on the NVT. By their nature, floodproofed buildings have their lowest floors below the Design Flood Elevation (DFE). Typically, there's nothing on the Elevation Certificate noting it was for a building that's been floodproofed. Such Elevation Certificates when viewed absent an accompanying Floodproofing Certificate cause the building to appear non-compliant, minus-rated and an NVT violation.

Attach copies of the Floodproofing Certificates and categorize these as compliant floodproofed structures.

## Mobile Home Parks

Until recently, mobile/manufactured homes installed within existing designated mobile home parks or subdivisions were only required to be elevated not less than 36 inches in height above the grade, regardless of Base Flood Elevation (BFE) [44 CFR Section 60.3]. Yet there's nothing on an Elevation Certificate noting that structure was a mobile home, nor did it indicate it was located within a mobile home park. Thus, they may have been viewed as non-compliant, minus-rated and an NVT violation.

Where a mobile/manufactured home was installed under the 36-inch rule, attach a copy of Elevation Certificate (if available), and property taxing records which should indicate its construction type as a mobile home and that it's located within a zoned mobile home park. Attach a dated copy of the mobile home installation permit showing the install occurred prior to any subsequent ordinance change requiring higher elevation.

In years past, it was common for communities to forego the need for an Elevation Certificate on mobile homes where compliance was easily determined with a yardstick. Absent a certificate, property appraiser photographs often show the home is at least three feet above the ground. Including a photograph of the home against a yardstick may help resolve questionable heights.

## Demolition Permits

Plotting demolition permits in GIS saves much research time. Queries such as "Which parcels contain both NVT listings and demolition permits" rapidly helps identify NVT listings where the offending buildings may have already been removed or replaced. Especially if the permitting distinguished minor demolitions from whole structure demos.

## V-Zone Buildings w/o Flood Vents

In communities governed by ASCE 24, prior to version ASCE 24-14, breakaway walls in "V" type flood zones weren't required to include flood vents. Elevation Certificates

often noted an enclosure with "zero" for ventilated square inches, which was compliant at the time.

Note these as compliant, attaching documentation showing the year built and utilization of breakaway walls.

# Active Code Enforcement Cases

Where floodplain violations have triggered local code enforcement cases that remain active, attach copies of the charging documents that describe the floodplain violation(s) and note these NVT listings as pending resolution in the courts.

# NVT Points with Elevation Certificates

Another good source for clearing inappropriate NVT listing is for those for which you have Elevation Certificates. Look for those with permit application dates prior to Design Flood Elevation (DFE) requirements but completed after DFE became the standard. Note these as compliant structures to which the DFE didn't apply.

ECs showing compliant relatively new structures are prime indicators an offending building may have been demolished. Check the permitting history for demo permits.

# Section 1316 Declarations

This particular community had some 40 active Section 1316 Declarations, but only one appeared on the NVT. It's believed 1316's shouldn't appear on the NVT as they're not eligible for flood insurance through the NFIP. It's believed the one 1316 appearing on that NVT was a declaration not properly reported to or recorded by FEMA.
Update: As of March 30, 2024, FEMA advised such declarations should not presently appear on a community's NVT, but that policy is subject to change.

# Wildlife Reserves

US Government owned property isn't subject to local floodplain requirements. During the early mapping years, large swaths of federally owned lands were excluded from mapped FIRMs as not being within a Special Flood Hazard Area (SFHA). It appears federal wildlife reserves may have been presumed federally owned lands and thus excluded. However, such reserves can contain privately owned property. Yet, if when built, those areas weren't within the SFHA then those structures wouldn't have been subject to floodplain regulations.

Subsequent FIRMs likely incorporated such areas into the SFHA, which would give existing structures within those areas a different pre-FIRM date. Absent any post-FIRM alterations to the buildings which would have triggered floodplain compliance, these structures should be identified as "pre-FIRM." Include comments explaining the different FIRM date and attach copies of:

- FIRM panels in which those areas were excluded from the SFHA.
- Panels of subsequent FIRMs documenting the pre-FIRM date for those structures.
- Copies of permits documenting pre-FIRM construction.
- Permitting history showing an absence of floodplain triggering permits.

## Violations

Where your research shows the likelihood of a floodplain violation, categorizing it as such will give your community a better perspective of how the NVT should look.

Further categorizing the type of potential violations – inadequate flood ventilation, unpermitted enclosure, occupancy, etc. – will better define the scope of the problem.

> When encountering duplicate NVT listings for the same building, check the "Violation ID" number. If they're the same, you have an accidental duplicate and need to delete one. If they're different, report them separately as there are two separate NVT listings for this building.

# Status Categories

| |
|---|
| Passed 999 Insp*:  Passed an earlier floodplain inspection during the former enclosure compliance inspection program. |
| Follow-up needed: A review of available data couldn't resolve the matter. |
| Violation?: Upon review, available data suggests the likelihood of floodplain violation(s). |
| Pre-FIRM: Structure and improvements were permitted prior to [pre-FIRM date]. |
| Building Now Compliant: Structure has since brought into compliance after follow-up. |
| Demolished: The suspected offending structure has been demolished. |
| Referred to Code: Those with active code compliance cases pending. |
| Compliant: Structure appears floodplain compliant. Nature of the complaint unidentifiable. |
| Out of Jurisdiction:  Located in some jurisdiction other than Unincorporated Monroe County. |
| Location Unk: NVT data isn't descriptive enough to identify the location/structure. |
| Floodproofed: Non-residential structures that were floodproofed, where Elevation Certificates alone inappropriately suggests a violation. |
| Sec. 1316 Filed: A Section 1316 Declaration already be in-place. |
| Variance Issued, floodplain |
| No Record: No record of any structures on this parcel. |

# 4.  Research

## Property Tax Records

Property tax records can contain a wealth of information helpful to evaluating NVT listings. Such online records are subject to change as taxing updates occur, making the previous information more difficult to collect.

Parcel numbers, year built, lot/block numbers, permitting history, sketches and photos are the quickest method of triaging NVT listings. Remain mindful that over time, with parcel unifications, building rotations and the like, parcel numbers and addresses could have changed. Historical aerial imagery layers in GIS accompanied by historical FIRM overlays quickly show what structures existed when and the relevant FIRM at the time.

Thus, it's recommended to obtain copies of three items from each property record and attach them to each NVT point.:

- Property card
- Building photos (full size)
- Building sketches (full size)

Note: While photos and sketches often appear on property cards, they're small and difficult to read. It's worth the extra effort to enlarge and save those parts separately.

> Your GIS specialist can usually create a field with a URL link for each NVT listing that takes you directly to the property appraiser's online record for that parcel. This can be a huge time saver if you've a lot of listings to research.
>
> GIS Technical note: 'https://URL={}'.format(!*parcel#field*!)

| Property Card | RI_Num |
| --- | --- |
| https://qpublic.schneidercorp.cor | 94 |
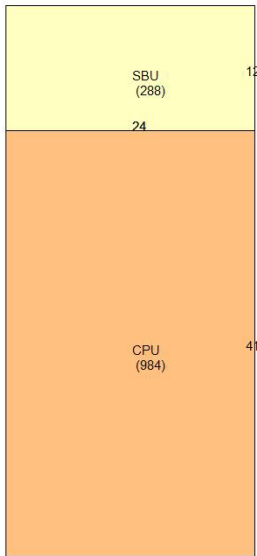
Building sketches from taxing agencies are a good reference for quickly triaging NVT listings. In this example, the ground level has an open carport area (CPU, orange), and is accompanied by at 288-sf utility enclosure (SBU, yellow).

Since the enclosure is less than the current maximum of 299-sf, the NVT concern is likely related to inadequate flood ventilation.

In this post-FIRM example, there are four separate enclosures at ground level: Garage, tan; two utility enclosures, yellow; living space, green.



Depending upon the year of construction compared to the floodplain ordinances in effect at the time, four enclosures of this size may have been permittable; yet habitable space wouldn't have been approved. The follow-up necessitates an archives search to learn what was permitted and when.
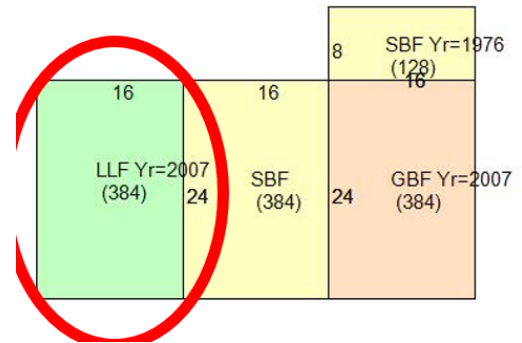
# Permitting Archives

While permitting archives are useful to show what work was permitted, they're equally as useful to show what wasn't permitted. A pre-FIRM NVT listing might be cleared by showing no post-FIRM alterations had been permitted. Conversely, a property appraiser's sketch showing a post-FIRM enclosure may show unpermitted enlargement and occupancy in need of follow-up.

QUICK TIP
Elevation Certificates were first introduced during Oct. 1981. It also doubled as a floodproofing certificate.

Certain permits after initial construction should draw immediate attention and saving of those documents:

- Enclosures
- Additions
- Demolitions
- Major renovations

Enclosure permits compared to property appraiser building sketches are quick indicators it has/hasn't been further enlarged, or usage changed.

Permits for additions may have included construction a new enclosure or removal of a noncompliant one.

Demolition permits may have been issued to achieve floodplain compliance or removal of a previous offending structure, especially in disaster prone areas.

Major renovations may indicate a Substantial Improvement did/didn't occur, possibly including the removal of a noncompliant enclosure.

Note: If you're fortunate, a parcel history may also include past floodplain related code compliance cases. Documentation from such cases can help clear NVT listings by showing they were brought into compliance.

# Google Streetview

Google Streetview is a highly efficient method of quickly checking locations, mindful that images from smaller streets can be several years old. Screen captures, especially historical views, are useful to show changes over time compared to permitting.

## Real Estate Listings

Even if a property has sold, the real estate listings often remain and showcase the entire interior areas which can help clear an NVT listing or suggest that further follow-up is necessary.

# 5. ArcGIS Dashboard

## Big Picture at a Glance

Once a dashboard has been setup, it's updated in real-time as your GIS data entries are made. A combination of gauges, indicators and charts can be customized to your needs. Related sub-charts become visible when clicking on the sub-tabs immediately beneath some of the charts.
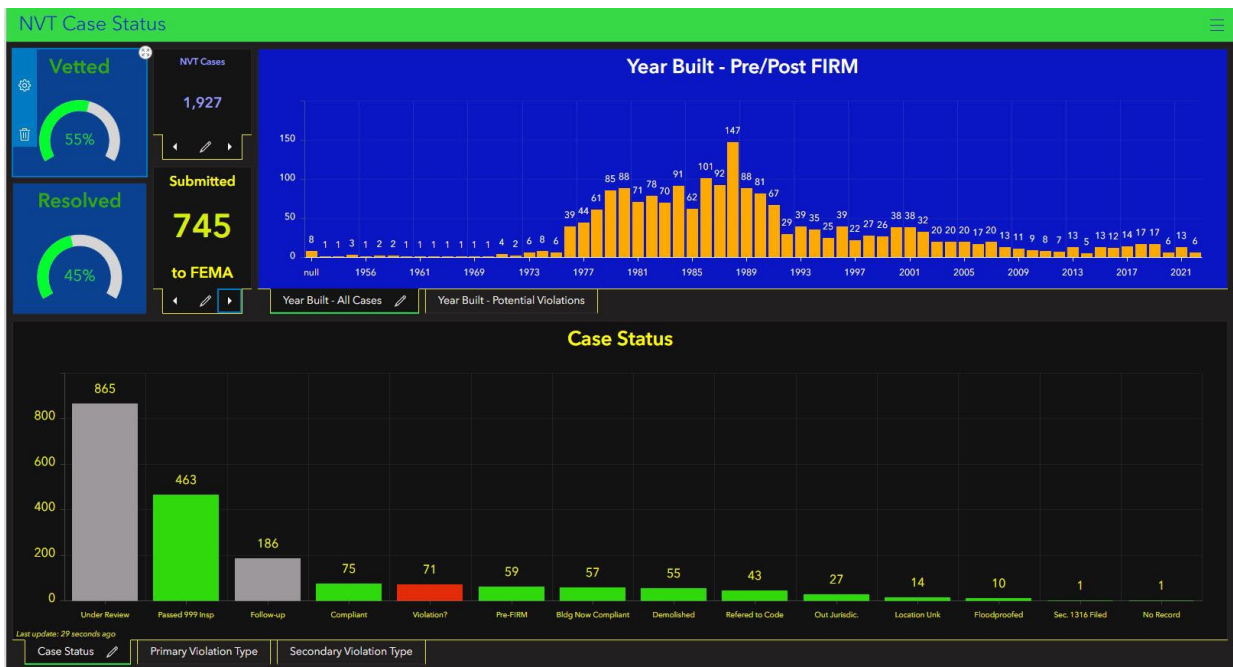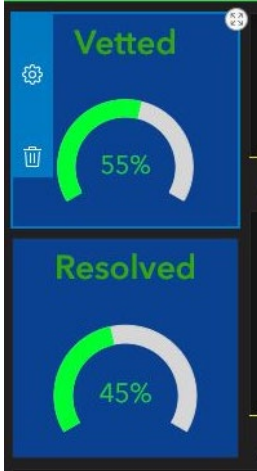
The "Vetted" and "Resolved" gauges are handy progress meters.

This pair of gauges shows triaging of the NVT listings is more than halfway done (55%). Of those reviewed so far, there was enough information to categorize 45% of the likely resolutions.

So far, only 10% need will require follow-up efforts.
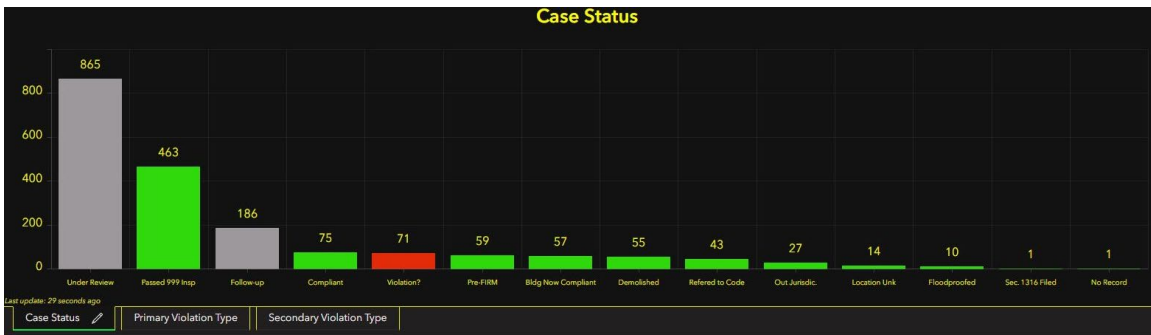


The case status chart shows individual counts of each status category. (see Status Categories)
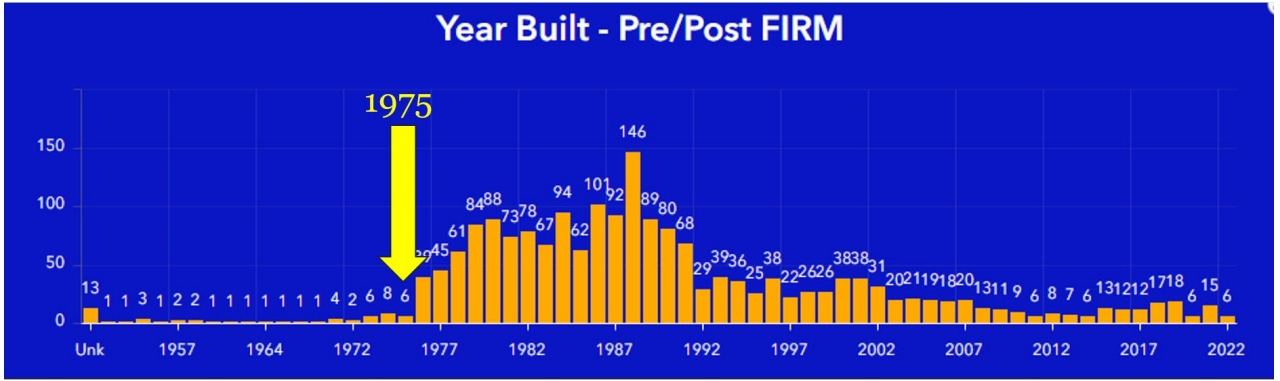
The year-built chart uses the property appraiser's construction date (Certificate of Occupancy date) to age the NVT structures. The pre-FIRM date (12/31/1974) for this community is indicated by the yellow arrow. Initially the 'violation' listings for 1975 and 1976 were much higher, yet research disclosed a number of those completed buildings were pre-FIRM permits and thus should be removed from the NVT.
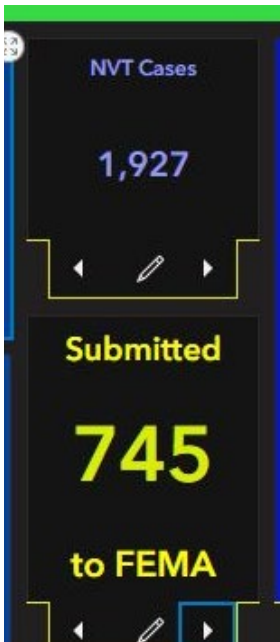


These indicators simply show the number of NVT listings followed by the number of resolutions submitted to FEMA to date.
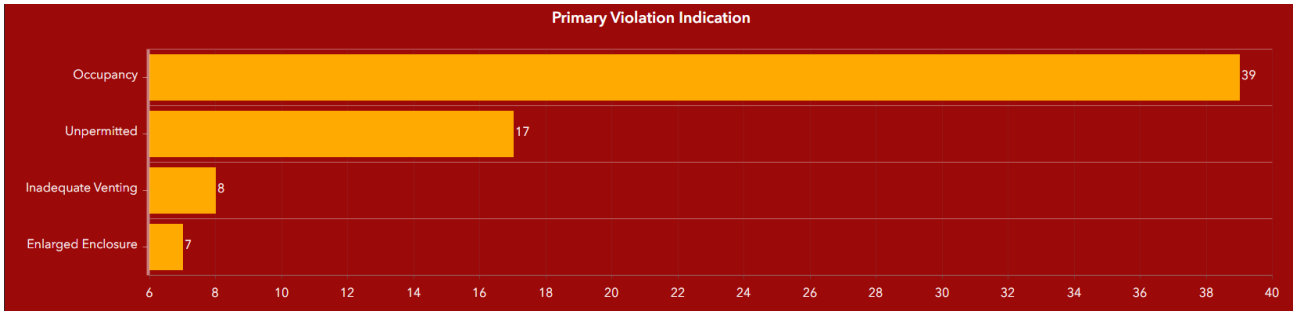
A sub-chart of potential floodplain violations further categorizes them by apparent cause to help define the scope of follow-up needed.

# 6. The Data

The confidential NVT data provided to communities consists of a spreadsheet with the following:

| County | Standardized address | Violation ID | Violation Type | Violation Source | Violation Zone | Street1 | Street2 | City | St | Zip | Zip Suffix | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Redacted | Redacted | Low floor | Minus rated | AE | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | AE | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | A1-30 | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | AE | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | AE | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | A1-30 | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | AE | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | AE | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | AE | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | AE | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |
| | Redacted | Redacted | Low floor | Minus rated | AE | Redacted | Redacted | | FL | | Redacted | Redacted | Redacted |

*Figure 2  Lat/Lon to six decimal points*

| Identified Date | Mitigated | Elevation Diff | Postfirm Flag | LOMC Casenum | Class rate | Discount | St Code | Comm Code | Init Date |
|---|---|---|---|---|---|---|---|---|---|
| 08/02/2022 | No | -1 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -7 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -3 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -1 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -3 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -7 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -5 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -6 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -5 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -6 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -2 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -4 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -3 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -5 | Y | | 03 | 35% | 12 | 5129 | |
| 08/02/2022 | No | -5 | Y | | 03 | 35% | 12 | 5129 | |

# 7. Recommend NVT Resolutions

There are six status options for a listing in the NVT database. An alleged violation is resolved upon one of the following conditions having been met. We'll be modifying our GIS table to include this field as a recommended resolution,

- Mitigated to meet 44 CFR 60.3 requirements.
- Mitigated to meet more restrictive state requirements.
- Building no longer exists
- Review determined structure not in violation.
- Mitigated to maximum extent possible.
- Removal from NVT

Structures so resolved remain on the NVT, but not as violations but as mitigated structures. The only instance a structure may be removed from the NVT is when it's been shown that it should never have been listed. "Removal"

will be included in the community's response as an anticipated resolution when appropriate.

# 8. GIS Data Fields

| Shape | GIS system file |
|---|---|
| RECHAR | Parcel ID number |
| Status | Status of your review. Common status categories are preset (domains in GIS term) , but can be user modified. |
| Status_Date | Date of your most current status change. |
| Doc | Yes/No, whether you've finished gathering the documentation for this listing. While you may have resolved the concern, there's still documents to gather for submission. |
| Vetted | Date - Blank indicates this listing hasn't yet been triaged. Enter date indicating you've checked this listing. Regardless of the outcome, you'll need to know which have at least been checked. |
| Resolved | Date - Blank indicates still needs examination. Enter date when you've been able to categorize this listing. Except if categorized for "Follow-up." Entering follow-up means you couldn't categorize it. |
| PermitNo | Text - Permit # of corrective permit, or if in compliance, permit # showing such compliance. |
| PermitDate | Date - Above permit was issued. |
| YRBLT | Date (year only) - Date structure permit was issued or building permit application submitted. |
| VioType1 | Text (dropdown list) - If violation likely, note the most likely type: Occupancy, unpermitted, inadequate ventilation, |
| VioType2 | Text (dropdown list) - Any secondary likely violation type. |
| VioType3 | Text (dropdown list) - Any third-tier likely violation type. |
| Submitted | Date - Submitted to FEMA. Next future date if reporting periodically. This will allow you to know in which batch this report was - or will be - submitted to FEMA. |
| Comments | Text - Whatever you like |
| Standardized_address | Text - GIS Street address |
| Violation_ID | FEMA's NVT violation number |
| Violation_Type | FEMA's NVT violation type. Often reported as "Low Floor," meaning below the required minimum elevation. |
| Violation_Source | FEMA's NVT violation type. Often reported as "Minus Rated" (formally known as "Submit for Rate). |
| Violation_Zone | Flood zone type at the time the violation was noted. |
| Street1 | FEMA's street address |
| Street2 | FEMA's street address, additional information |

| City | FEMA's recorded location City. Often incorrect if that community gets it mail delivered from a post office in another community. |
|---|---|
| Mitigated | Yes/No - Whether FEMA records this structure as having been flood mitigated. Best to filter-out the "Yes" listing to focus on the "No" listings. |
| Elevation_Diff | Numerical - FEMA's record of how much lower the elevation is below the required minimum. |
| LOMC_Casenum | If the supposed violation was derived from a LOMC application, that case number will appear here. |
| LocCor | Yes/No - When the address had to be corrected from what the FEMA provided address was. |
| LOCATION | Local Record: Property Appraiser's parcel information. |
| PHYUNIT | Local Record: Property Appraiser's parcel information. |
| NAME | Local Record: Property Appraiser's parcel information. |
| NBRBLDG | Local Record: Property Appraiser's parcel information. |
| KEYNAME | Local Record: Property Appraiser's parcel information. |
| CONDO_COMPLEX | Local Record: Property Appraiser's parcel information. |
| SPECUSE | Local Record: Property Appraiser's parcel information. |
| BUSNAME | Local Record: Property Appraiser's parcel information. |
| AW_501FU | Yes/No - If Repetitive Loss records need to be updated with FEMA based upon new information. |
| Own_phone | Text (local info) - Owner's telephone number |
| Own_email | Text (local info) - Owner's e-mail address |
| MH | Yes/No - Mobile Home?  Helpful for determining when different elevation standards might apply. |
| RL_List | Yes/No - Local note if this structure appears on our Repetitive Loss list. |
| Attach | Numerical - Number of document attachments to this record. |
| PreFIRMdate | Date - Helps when different pre=FIRM dates apply. |

# Appendix B – Index