



# How NAVFAC is Using GIS Data to Improve Real Property Audit-Readiness

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## Naval Facilities Engineering Command

**Our Mission:** NAVFAC is the Naval Shore and Expeditionary Systems Command that:

- Plans, builds, and maintains sustainable facilities.
- Delivers environmental, utilities and other base services.
- Acquires and manages expeditionary combat force systems and equipment.

**Our Vision:** We are the facilities technical and business experts with the total trust and confidence of the Navy and Marine Corps.

# About Audit Readiness



Financial Improvement Audit Readiness (FIAR) is mandated by law and its goal is for an independent auditor to give DoD an unqualified opinion, an accounting “clean bill of health,” on its financial statements.

Key capabilities:

- Effective physical inventories and reconciliation of records
- Effective controls over recording asset acquisitions, disposals and transfers
- Retain and make available supporting documentation to meet audit standards
- Effective controls over financial & management data in the Accountable Property System of Record (iNFADS)
- Effective processes, controls and system improvements

Over the past several years, NAVFAC developed new processes or enhanced existing processes to improve audit readiness. One of those processes is a Virtual Inventory to support Existence & Completeness.

## Requirement: Existence & Completeness

- Existence: Assets exist Book to Floor (Virtual Floor)
- Completeness: Assets exist Floor (Virtual Floor) to Book

Virtual Inventory is a quarterly process and is one of the tools to help improve data quality (making timely corrections, updates to inventory or GIS database).

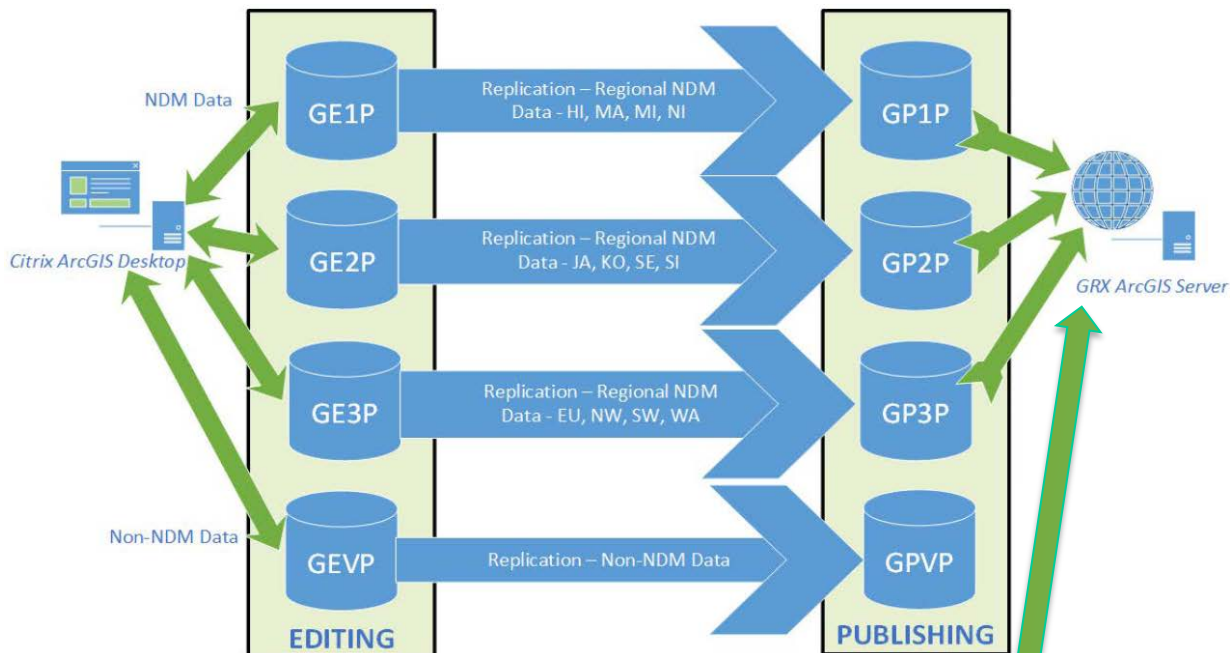
Once a match is confirmed between iNFADS and GIS, NAVFAC Real Property staff update a data element on the Real Property records to note this match (via mass update). This update occurs quarterly.

The unmatched reports (book to floor, floor to book) draw attention to the records that require attention for reconciliation that quarter.

**Operations and Use**

# **DATA RECONCILIATION TOOL (DRT)**

# GIS Data and Real Property Database



4/day replication

## Key Fields

### GIS Attributes:

facilityIDFK / RPUID  
installationID / RPSUID

### iNFADS Attributes:

facility\_id / RPUID  
site\_code / RPSUID

**NAVFAC**  
 Naval Facilities Engineering Command  
*internet*  
**Navy Facility Assets Data Store**

- Facilities
- Activities
- Category Codes
- Data Dictionary

3/day  
Replication of  
Facilities data  
into GIS  
databases

# Crosswalk



iNFADS to GIS Crosswalk defines the relationship between the Real Property Category Code and the corresponding GIS Feature Class.

Data Reconciliation Tool Crosswalk								Logout
Filters:								
All Feature Classes	All Feature Classes 2	All Feature Classes 3	All Category	All Nomenclature	All Category Names	All CCN Acti	All Feature Class	
Clear Filters								
GIS Feature Class	GIS Feature Class 2	GIS Feature Class 3	Category Code	Nomenclature	Category Name	CCNActiveInDRT	Feature Class Type	
RecreationSite			75050	OUTDOOR THEATER	700 Housing & Community	Y	A	
RecreationSite			75052	SKEET AND / OR TRAP RANGE	700 Housing & Community	Y	A	
Structure			75054	BAND STAND	700 Housing & Community	Y	A	
RecreationSite			75057	MWR OPERATED RECREATION GROUNDS	700 Housing & Community	Y	A	
RecreationSite			75058	RECREATIONAL CAMPGROUND - TENT	700 Housing & Community	Y	A	
RecreationSite			75059	RECREATIONAL CAMPGROUND - RV	700 Housing & Community	Y	A	
DockAndWharf			75060	MARINA	700 Housing & Community	Y	A	
DockAndWharf			75061	RECREATIONAL PIER	700 Housing & Community	Y	A	
Playground			75110	COMMUNITY PLAYGROUNDS	700 Housing & Community	Y	A	
Building			76010	MUSEUMS / MEMORIAL BUILDING	700 Housing & Community	Y	A	
StructureP			76020	OUTDOOR MONUMENT / MEMORIAL	700 Housing & Community	Y	A	
CemeteryOrBurialSite			76030	CEMETERY	700 Housing & Community	Y	A	
Building			81109	ELECTRIC POWER PLANT BUILDING	800 Utility & Ground Improvements	Y	A	
eGenerator			81110	ELECTRIC POWER PLANT - DIESEL	800 Utility & Ground Improvements	N	P	
eGenerator			81125	ELECTRIC POWER PLANT - STEAM	800 Utility & Ground	N	P	

# System Filters



Allows the tool to only select iNFADS and GIS records that are currently considered in the Virtual Inventory.

Data Reconciliation Tool

### GIS System Filter (read only)

ISACCOUNTABLE <span style="float: right;">▼</span>	not in <span style="float: right;">▼</span>	NO <span style="float: right;">▼</span>
OR	is <span style="float: right;">▼</span>	NULL <span style="float: right;">▼</span>
OWNER <span style="float: right;">▼</span>	not in <span style="float: right;">▼</span>	PPV <span style="float: right;">▼</span>
OR	is <span style="float: right;">▼</span>	NULL <span style="float: right;">▼</span>

### iNFADS System Filter (read only)

**iNFADS System Filter for DRT**

Last Modified 2016-07-15

ACTION_TYPE_CODE <span style="float: right;">▼</span>	not equal <span style="float: right;">▼</span>	0 <span style="float: right;">▼</span>
ACTION_TYPE_CODE <span style="float: right;">▼</span>	not equal <span style="float: right;">▼</span>	4 <span style="float: right;">▼</span>
FACILITY_TYPE_CODE <span style="float: right;">▼</span>	not in <span style="float: right;">▼</span>	1, 5 <span style="float: right;">▼</span>
ESTATE_CODE <span style="float: right;">▼</span>	not equal <span style="float: right;">▼</span>	31 <span style="float: right;">▼</span>
ESTATE_CODE <span style="float: right;">▼</span>	not equal <span style="float: right;">▼</span>	33 <span style="float: right;">▼</span>
FAMILY_HOUSING_IND <span style="float: right;">▼</span>	equal <span style="float: right;">▼</span>	N <span style="float: right;">▼</span>
REPORTING_COMPONENT_CODE <span style="float: right;">▼</span>	in <span style="float: right;">▼</span>	MCACT, MCRES, NAVACT, NAVRES <span style="float: right;">▼</span>
OPERATIONAL_STATUS_CODE <span style="float: right;">▼</span>	in <span style="float: right;">▼</span>	ACT, OUTG, SEMI <span style="float: right;">▼</span>
PRIME_USE_CATEGORY_CODE <span style="float: right;">▼</span>	not in <span style="float: right;">▼</span>	12516, 84152, 88010, 88020, 88030 <span style="float: right;">▼</span>



# Data Reconciliation Tool Interface – iNFADS to GIS



**Data Reconciliation Tool** Logout

**Reconciliation Reports**

[iNFADS to GIS](#)

[GIS to iNFADS](#)

[My Saved Queries](#)

**Summary Reports**

A: AM CCNs/Feature Classes ▼

[HQ Summary Report](#)

**User Help Information**

[Crosswalk Table](#)  
Crosswalk as of: 10/20/2016

[System Filters](#)

Region:  ▼

Installation:  ▼

Site:  All Sites

Category Codes: Summary Report Option:  A or  P

- ▶  Type 2 Buildings
- ▶  Type 3 Structures
- ▶  Type 4 Utilities

[Select/Deselect All](#) [Generate Report](#)

# iNFADS to GIS Report



## Data Reconciliation Tool

Logout

### Reconciliation Reports

iNFADS to GIS

GIS to iNFADS

My Saved Queries

### Summary Reports

A: AM CCNs/Feature Classes

HQ Summary Report

### User Help Information

Crosswalk Table

Crosswalk as of: 10/20/2016

System Filters

### Summary

Total number of iNFADS Records	60,000
iNFADS records with a GIS feature class match	59,215 (99%)
iNFADS records without a GIS feature class match	785 (1%)

### Unmatched iNFADS Records Details

### Matched iNFADS Records Details

301 - 310 of 785 items

RPUID	Facility ID	Facility No.	Facility Name	Region	Installation	Site	Cat. Code	Feature Class	Map Grid Loc
63979	NFA200000082999	5171	SW1.1.45-EOT	SAMPLE REGION	SAMPLE INSTALLAT...	Main Site	73025	RaiTrack	K17
158558	NFA200000083000	U8	NORTH SPUR	SAMPLE REGION	SAMPLE INSTALLAT...	SAMPLE SITE	81310	RaiTrack	
84251	NFA200000083001	141	NW1.2.55-EOT	SAMPLE REGION	SAMPLE INSTALLAT...	Main Site	21977	RaiTrack	G-03
86382	NFA200000083002	149	WEST SPUR	SAMPLE REGION	SAMPLE INSTALLAT...	Main Site	81159	RaiTrack	G-04
69538	NFA200000083003	2003	SE33.5	SAMPLE REGION	SAMPLE INSTALLAT...	Main Site	42135	RaiTrack	Q6
98733	NFA200000083004	481	EAST SPUR	SAMPLE REGION	SAMPLE INSTALLAT...	Main Site	73025	RaiTrack	7C
83346	NFA200000083005	156R	SE SPUR	SAMPLE REGION	SAMPLE INSTALLAT...	Main Site	14320	RaiTrack	M17
59624	NFA200000083006	2403	SOUTH SPUR	SAMPLE REGION	SAMPLE INSTALLAT...	Main Site	12520	RaiTrack	Y11
59626	NFA200000083007	2405	SW SPUR	SAMPLE REGION	SAMPLE INSTALLAT...	Main Site	84209	RaiTrack	V27
72365	NFA200000083008	089	NW3.54	SAMPLE REGION	SAMPLE INSTALLAT...	Main Site	73021	RaiTrack	J8

# Data Reconciliation Tool Interface – GIS to iNFADS



## Data Reconciliation Tool

Logout

### Reconciliation Reports

- iNFADS to GIS
- GIS to iNFADS**
- My Saved Queries

### Summary Reports

A: AM CCNs/Feature Classes

- HQ Summary Report

### User Help Information

- Crosswalk Table  
Crosswalk as of: 10/20/2016
- System Filters

Region: CNR Southwest

Installation: All Installations

Site:  All Sites

Feature Classes: Summary Report Option:  A or  P

- AccessControl
- AirfieldSection
- BankArmoring
- Bridge
- Building
- CemeteryOrBurialSite
- DockAndWharf
- Drydock
- Fence
- GolfCourse
- MilitaryRange
- Playground
- RailTrack
- RecreationSite

Select/Deselect All      Generate Report

# GIS to iNFADS Report



## Data Reconciliation Tool

Logout

### Reconciliation Reports

iNFADS to GIS

GIS to iNFADS

My Saved Queries

### Summary Reports

A: AM CCNs/Feature Classes

HQ Summary Report

### User Help Information

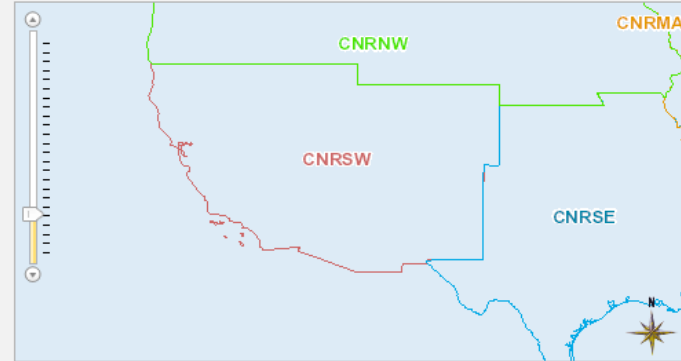
Crosswalk Table

Crosswalk as of: 10/20/2016

System Filters

### Summary

Total number of GIS records	60,000
GIS records found with an iNFADS match	35,000 (58%)
GIS records without an iNFADS match	25,000 (42%)
GIS records with a Blank Facility ID	16,000
GIS records with an Unmatched Facility ID	1,000
GIS records with an Invalid Facility ID	3,000
GIS records with Site Code Mismatch	5,000



### Unmatched GIS Records Details

### Matched GIS Records Details

### Site Code Mismatch Details

All
  Blank Facility ID
  Unmatched Facility ID
  Invalid Facility ID

1 - 10 of 20,000 items

Facility ID	Facility No.	Region	Installation	Site	Feature Class	Reason
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID
		CNR Southwest	NAWS CHINA LAKE	Main Site	RailTrack	Blank Facility ID

# HQ Summary Reports



**Data Reconciliation Tool**

**Reconciliation Reports**

- iNFADS to GIS
- GIS to iNFADS
- My Saved Queries

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**Summary Reports**

- A: AM CCNs/Feature Classes
- A: AM CCNs/Feature Classes**
- All CCNs/Feature Classes
- P: PW CCNs/Feature Classes



**Processing**

Report generation may take up to several minutes.  
Please wait while report is being created.



Summary Tab

	A	B	C	D	E
1	<b>Region</b>	<b>iNFADS&gt;GIS Unmatched (%)</b>	<b>iNFADS&gt;GIS Matched (%)</b>	<b>GIS&gt;iNFADS Unmatched (%)</b>	<b>GIS&gt;iNFADS Matched (%)</b>
2	REGION 1	25	75	25	75
3	REGION 2	75	25	75	25
4	REGION 3	25	75	25	75
5	REGION 4	75	25	75	25
6	REGION 5	25	75	25	75
7	REGION 6	75	25	75	25
8	REGION 7	25	75	25	75
9	REGION 8	75	25	75	25
10	REGION 9	25	75	25	75
11	REGION 10	75	25	75	25
12	REGION 11	25	75	25	75

Details Tab

	A	B	C	D	E	F	G	H	I	J
1	<b>Region</b>	<b>Installation</b>	<b>iNFADS&gt;GIS Unmatched Total</b>	<b>iNFADS&gt;GIS Unmatched Percent</b>	<b>iNFADS&gt;GIS Matched Total</b>	<b>iNFADS&gt;GIS Matched Percent</b>	<b>GIS&gt;iNFADS Unmatched Total</b>	<b>GIS&gt;iNFADS Unmatched Percent</b>	<b>GIS&gt;iNFADS Matched Total</b>	<b>GIS&gt;iNFADS Matched Percent</b>
2	REGION 1	Installation 1	10	6	150	94	600	40	900	60
3	REGION 1	Installation 2	10	6	150	94	600	40	900	60
4	REGION 1	Installation 3	10	6	150	94	600	40	900	60
5	REGION 1	Installation 4	10	6	150	94	600	40	900	60
6	REGION 2	Installation 5	10	6	150	94	600	40	900	60
7	REGION 2	Installation 6	10	6	150	94	600	40	900	60
8	REGION 2	Installation 7	10	6	150	94	600	40	900	60
9	REGION 3	Installation 8	10	6	150	94	600	40	900	60