



ALABAMA 911 BOARD

Between the Devil and the Deep Blue Sea: Alabama's GIS Project
October 12, 2021
AL NENA Gulf Coast Conference 2021
Orange Beach, AL

Introduction & Contact Information

Anderson Brooms

GIS Program Manager for the Alabama 9-1-1 Board

Email: anderson@al911board.com

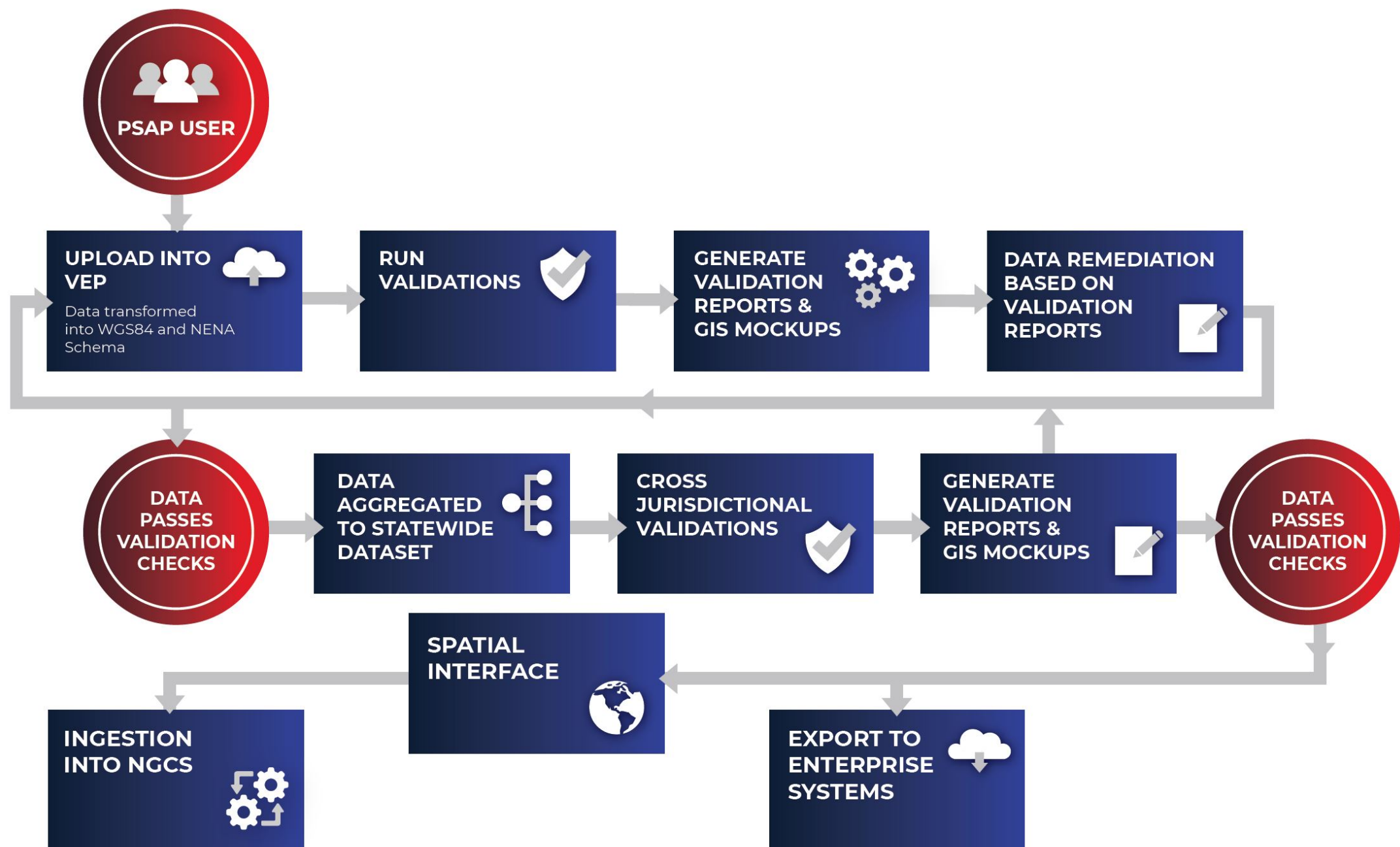
Phone: 334-440-7911



What is the Alabama 9-1-1 Board Office's Statewide GIS Project?

- The collection of the 7 mandatory GIS layers as outlined in the NENA GIS data model for Next Generation 9-1-1 operations, as well as any other available GIS data to aid in 9-1-1 operations
- Provisioning these layers to DATAMARK's VEP software
- Utilizing the VEP software to run data validations and generate GIS data anomaly reporting
- Delivering actionable GIS layers and a map package data back to the ECD for their GIS professional to correct their GIS data based on the anomaly reporting
- Repeating this process iteratively, on a regular schedule, until the GIS data is fully remediated to the NENA Standard for NG 9-1-1 GIS Data Model
- Provisioning the fully remediated GIS data to the Spatial Interface





Role of GIS in NG9-1-1

- GIS becomes the central database for the Alabama Next Generation Emergency Network
- GIS is fully integrated into and required for Next Generation 911
- Allows for geospatial call routing through the ECRF to the correct PSAP
- Validates the location of the call prior to the call being delivered to the PSAP
- Identifies the Emergency Services Zone (ESZ)/Emergency Service Number (ESN) for the 9-1-1 spatial location
- Provides emergency service routing instructions based on caller location rather than the data associated with the telephone number



Navigational Beacons Along the Journey to the Port of VEP

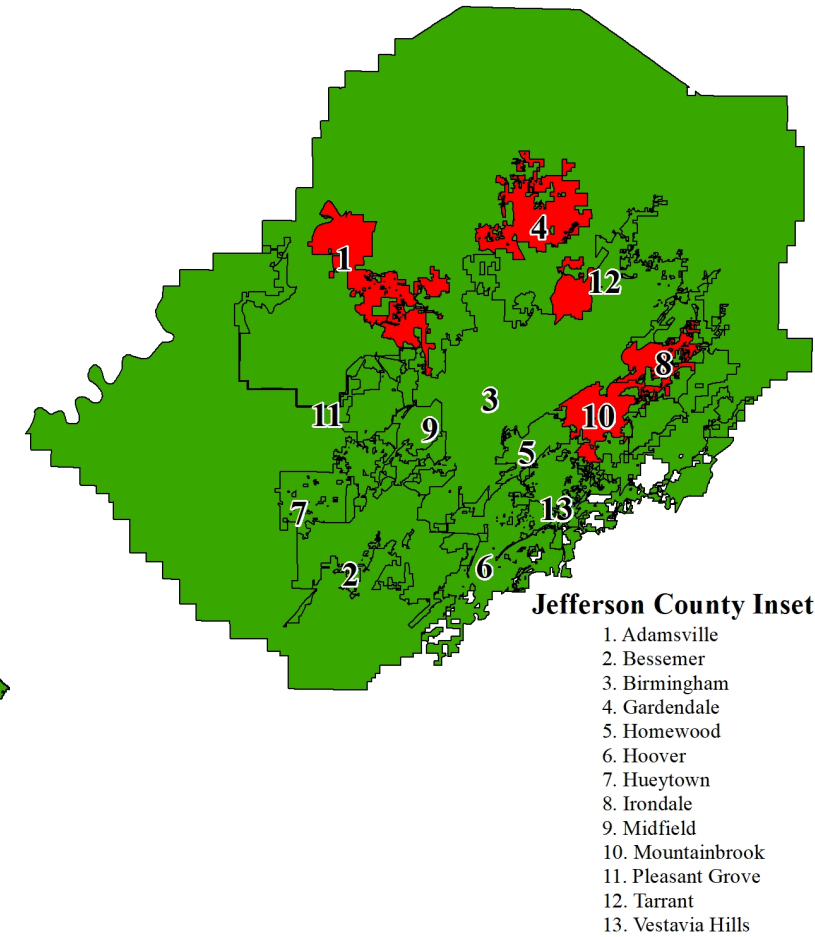
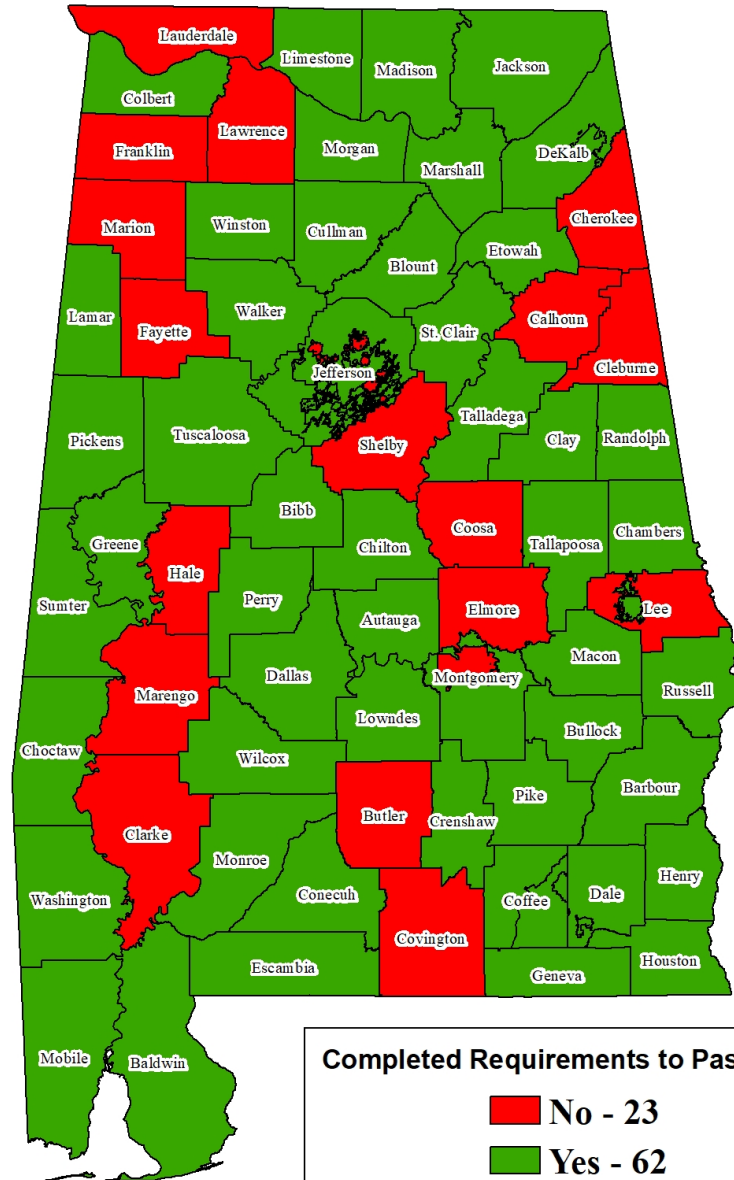
- Embark with an initial GIS data upload to DATAMARK
- Satisfy the requirements of Gap 1
- Satisfy the requirements of Gap 2
- Attend VEP Validator Training
- Attend VEP Editor Training
- You have arrived safely to your VEP instance!



Gap 1 Completion Status Map

Gap 1 Requirements

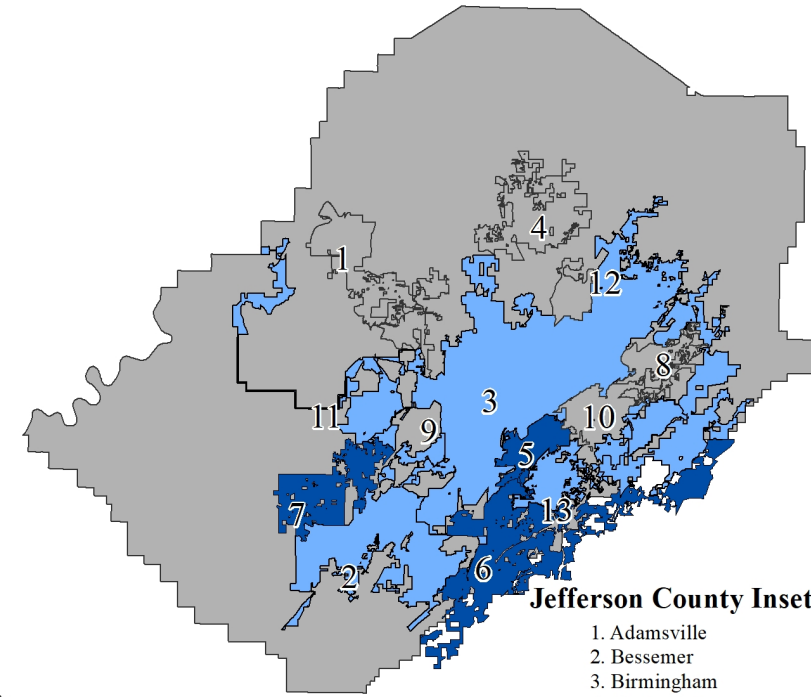
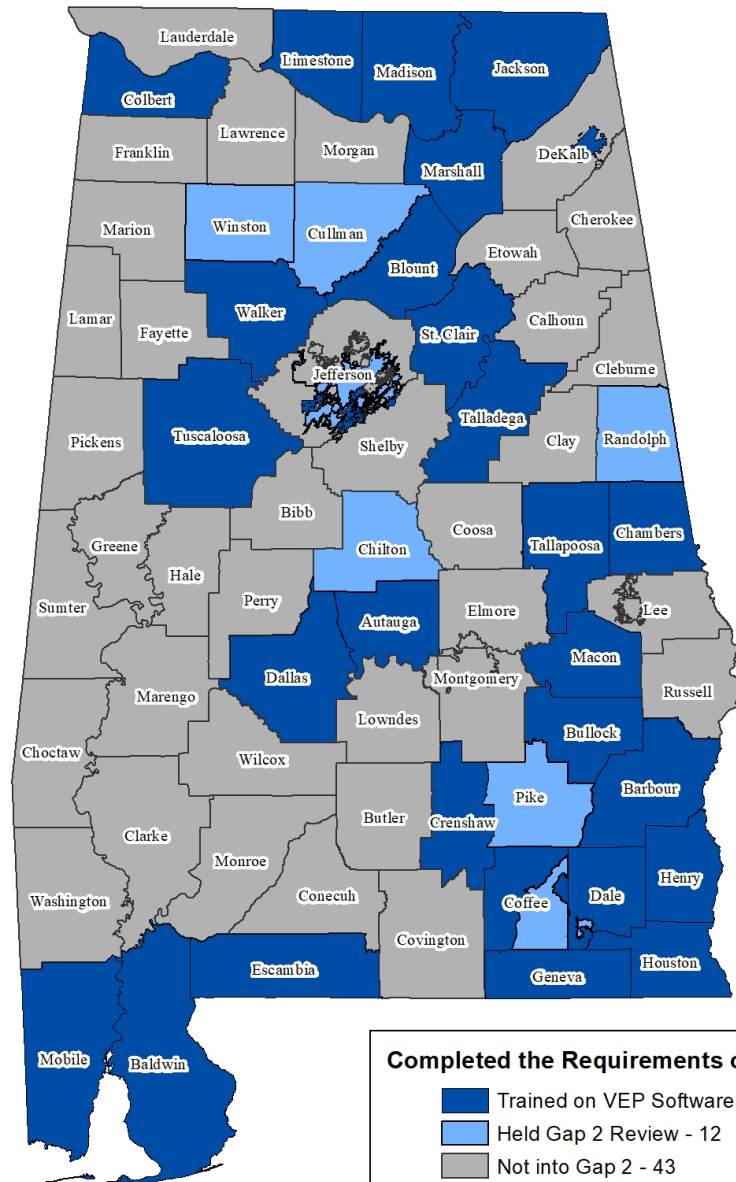
- Upload your GIS data in its native format and schema
- Attend your Gap 1 report review with DATAMARK and myself
- Make the necessary changes to your schema that DATAMARK outlines in the Gap 1 Report
- Alternatively, you can take advantage of the Data Modification Agreement



Gap 2 Requirements

- Attend your Gap 2 Report Review with DATAMARK and myself
- Attend VEP Validator and Editor Training

Gap 2 Completion Status Map



Jefferson County Inset

1. Adamsville
2. Bessemer
3. Birmingham
4. Gardendale
5. Homewood
6. Hoover
7. Hueytown
8. Irondale
9. Midfield
10. Mountainbrook
11. Pleasant Grove
12. Tarrant
13. Vestavia Hills



VEP Training: The Rudder of your VEP Experience

- Validator Training covers initial set-up, administrative functions, the validation process, and what you get after validations are run
- Editor Training covers the robust set of editing tools contained in VEP
- VEP Validator Training and Editor Training are separate and completed during 2 different sessions
- Validator Training is mandatory to receive the log-ins to your VEP instance
- Editor is an excellent GIS resource for an ECD that currently does not have GIS software in house



Calming the Rough Waters of the NENA Data Model

Descriptive Name	Field Name	M/C/O	Type	Field Width
Discrepancy Agency ID	DiscrpAgID	M	P	75
Date Updated	DateUpdate	M	D	-
Effective Date	Effective	O	D	-
Expiration Date	Expire	O	D	-
Road Centerline NENA Globally Unique	RCL_NGUID	M	P	254
Left Address Number Prefix	AdNumPre_L	C	P	15
Right Address Number Prefix	AdNumPre_R	C	P	15
Left FROM Address	FromAddr_L	M	N	6
Left TO Address	ToAddr_L	M	N	6
Right FROM Address	FromAddr_R	M	N	6
Right TO Address	ToAddr_R	M	N	6
Parity Left	Parity_L	M	P	1
Parity Right	Parity_R	M	P	1
Street Name Pre Modifier	St_PreMod	C	E	15
Street Name Pre Directional	St_PreDir	C	P	9
Street Name Pre Type	St_PreTyp	C	E	50
Street Name Pre Type Separator	St_PreSep	C	E	20
Street Name	St_Name	M	E	60
Street Name Post Type	St_PosTyp	C	E	50
Street Name Post Directional	St_PosDir	C	P	9
Street Name Post Modifier	St_PosMod	C	E	25
Legacy Street Name Pre Directional*	LSt_PreDir	C	P	2
Legacy Street Name*	LSt_Name	C	P	75
Legacy Street Name Type*	LSt_Type	C	P	4
Legacy Street Name Post Directional*	LSt_PosDir	C	P	2
ESN Left*	ESN_L	C	P	5
ESN Right*	ESN_R	C	P	5
MSAG Community Name Left*	MSAGComm_L	C	P	30
MSAG Community Name Right*	MSAGComm_R	C	P	30
Country Left	Country_L	M	P	2
Country Right	Country_R	M	P	2

Descriptive Name	Field Name	M/C/O	Type	Field Width
State Left	State_L	M	P	2
State Right	State_R	M	P	2
County Left	County_L	M	P	40
County Right	County_R	M	P	40
Additional Code Left	AddCode_L	C	P	6
Additional Code Right	AddCode_R	C	P	6
Incorporated Municipality Left	IncMuni_L	M	E	100
Incorporated Municipality Right	IncMuni_R	M	E	100
Unincorporated Community Left	UnincCom_L	O	E	100
Unincorporated Community Right	UnincCom_R	O	E	100
Neighborhood Community Left	NbrhdCom_L	O	E	100
Neighborhood Community Right	NbrhdCom_R	O	E	100
Postal Code Left	PostCode_L	O	P	7
Postal Code Right	PostCode_R	O	P	7
Postal Community Name Left	PostComm_L	O	P	40
Postal Community Name Right	PostComm_R	O	P	40
Road Class	RoadClass	O	P	15
One-Way	OneWay	O	P	2
Speed Limit	SpeedLimit	O	N	3
Validation Left	Valid_L	O	P	1
Validation Right	Valid_R	O	P	1



Calming the Rough Waters of the NENA Data Model

Descriptive Name	Field Name	M/C/O	Type	Field Width
Discrepancy Agency ID	DiscrpAgID	M	P	75
Date Updated	DateUpdate	M	D	-
Effective Date	Effective	O	D	-
Expiration Date	Expire	O	D	-
Road Centerline NENA Globally Unique	RCL_NGUID	M	P	254
Left Address Number Prefix	AdNumPre_L	C	P	15
Right Address Number Prefix	AdNumPre_R	C	P	15
Left FROM Address	FromAddr_L	M	N	6
Left TO Address	ToAddr_L	M	N	6
Right FROM Address	FromAddr_R	M	N	6
Right TO Address	ToAddr_R	M	N	6
Parity Left	Parity_L	M	P	1
Parity Right	Parity_R	M	P	1
Street Name Pre Modifier	St_PreMod	C	E	15
Street Name Pre Directional	St_PreDir	C	P	9
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Legacy Street Name Pre Directional*	LSt_PreDir	C	P	2
Legacy Street Name*	LSt_Name	C	P	75
Legacy Street Name Type*	LSt_Type	C	P	4
Legacy Street Name Post Directional*	LSt_PosDir	C	P	2
ESN Left*	ESN_L	C	P	5
ESN Right*	ESN_R	C	P	5
MSAG Community Name Left*	MSAGComm_L	C	P	30
MSAG Community Name Right*	MSAGComm_R	C	P	30
Country Left	Country_L	M	P	2
Country Right	Country_R	M	P	2

Descriptive Name	Field Name	M/C/O	Type	Field Width
State Left	State_L	M	P	2
State Right	State_R	M	P	2
County Left	County_L	M	P	40
County Right	County_R	M	P	40
Additional Code Left	AddCode_L	C	P	6
Additional Code Right	AddCode_R	C	P	6
Incorporated Municipality Left	IncMuni_L	M	E	100
Incorporated Municipality Right	IncMuni_R	M	E	100
Unincorporated Community Left	UnincCom_L	O	E	100
Unincorporated Community Right	UnincCom_R	O	E	100
Neighborhood Community Left	NbrhdCom_L	O	E	100
Neighborhood Community Right	NbrhdCom_R	O	E	100
Postal Code Left	PostCode_L	O	P	7
Postal Code Right	PostCode_R	O	P	7
Postal Community Name Left	PostComm_L	O	P	40
Postal Community Name Right	PostComm_R	O	P	40
Road Class	RoadClass	O	P	15
One-Way	OneWay	O	P	2
Speed Limit	SpeedLimit	O	N	3
Validation Left	Valid_L	O	P	1
Validation Right	Valid_R	O	P	1



Dashboard

Uploads

Validate

Map

Downloads

Utilities

Reports

Admin

2
NEIGHBORING COLLABORATORS

3
TOTAL USERS

3
TOTAL VALIDATIONS RAN

1
OPEN EDIT AND UPLOAD SESSIONS

-
NEXT SCHEDULED VALIDATION RUN

10/10
NEXT SCHEDULED AGGREGATION

ANOMALY STATISTICS

TOTAL ANOMALY COUNT

TOTAL ANOMALIES 94,649 TOTAL ANOMALIES

TOTAL ANOMALY COUNT BY FEATURE CLASS

ADDRESS POINT 23,359 TOTAL ANOMALIES

CENTERLINE 31,899 TOTAL ANOMALIES

LAW 373 TOTAL ANOMALIES

FIRE 375 TOTAL ANOMALIES

EMS 226 TOTAL ANOMALIES

PSAP BOUNDARY 2 TOTAL ANOMALIES

USER ACCOUNTS

	Name	User Role	Last Login
👤	Scott Warner	System Admin	1 days ago
👤	Samantha Roberts	Validator	8 days ago
👤	Cindy Barber	System Admin	76 days ago

VALIDATION RESULTS

Cross-jurisdictional Validations

Individual Jurisdiction Validations

Validation Results	Latest Run	Number of Anomalies	Percentage of Total	+/- Change (Previous Run)
ALI Not Reflected in AP	04/27/2021	2,539	6%	19439 ▼
ALI Not Reflected in AP and RCL	04/27/2021	19,529	47%	19529 ▲
ALI Not Reflected in RCL	04/27/2021	11,585	28%	19395 ▼
AP Duplicate Point	04/27/2021	2,280	2%	43 ▲
AP Maps to Multiple RCL	04/27/2021	452	0%	2 ▼
AP Missing Attribution	04/27/2021	70	0%	23 ▼
AP Not Contained Within Boundary	04/27/2021	29	0%	29 ▲

DATA READINESS

TOTAL RECOMMENDED FIELDS POPULATED

TOTAL RECORDS POPULATED 142,396 OF 144,778 - 98.4% RECORDS PASSING

RECOMMENDED FIELDS POPULATED BY FEATURE CLASS

ADDRESS POINT 122,314 OF 122,349 - 100%

CENTERLINE 20,082 OF 22,207 - 90.4%

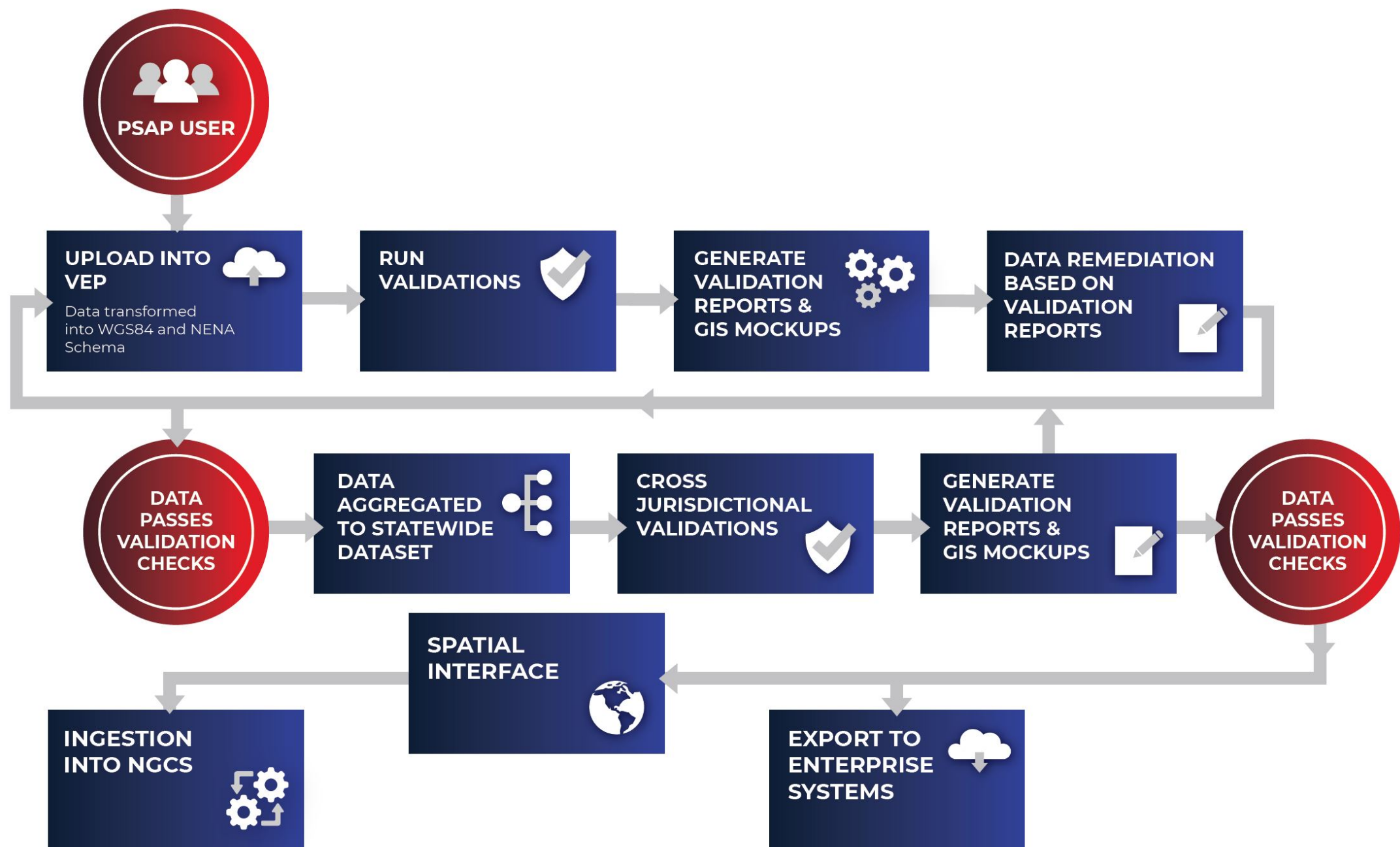
LAW 0 OF 153 - 0%

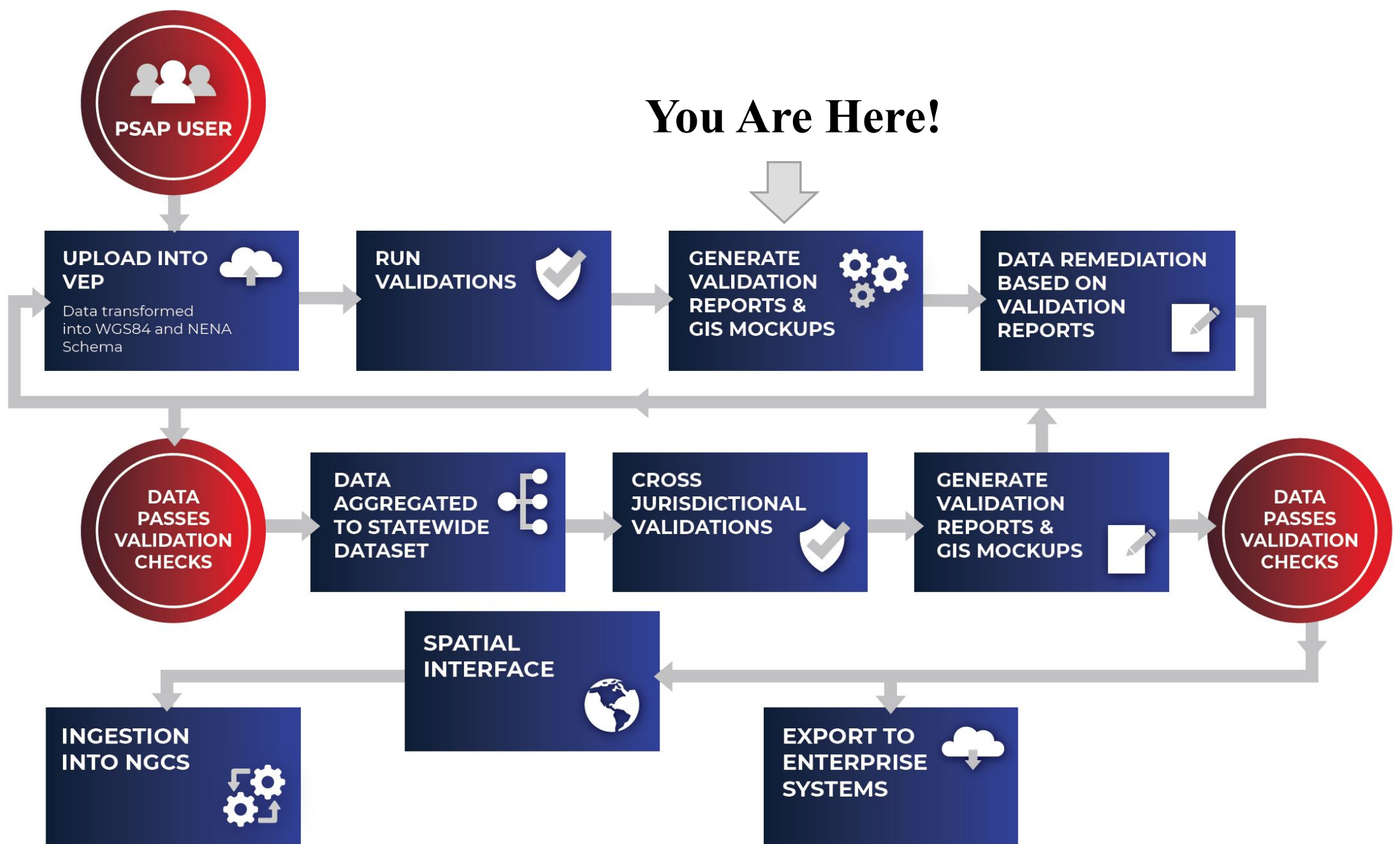
FIRE 0 OF 53 - 0%

EMS 0 OF 15 - 0%

PSAP BOUNDARY 0 OF 1 - 0%







Things to remember once you have your VEP Instance

- This is an iterative process
- Log in and run validations regularly
- Fixing things breaks things
- Utilize your dashboard to track changes over time
- Utilize the customer support ticket portal



We have had A LOT of Success on this Journey

- 85 ECDs Statewide
- We have collected 77 ECD initial GIS Data uploads
- 62 ECDs have completed the Gap 1 Requirements
- 48 ECDs have had their GIS data onboarded into their VEP instance
- 30 ECDs have been fully trained on both Validator and Editor



Questions

Anderson Brooms

GIS Program Manager for
the Alabama 9-1-1 Board
anderson@al911board.com
Office: 334-440-7911

