



NG911 GIS Data Readiness Webinar

Preparing for Geo-routing in 2026

MSP State 911 Office – Amy Magirl
DTMB State GIS Office – Mark Holmes
Peninsula Fiber Network – Tim McKee
INdigital – Amy Brumbaugh-Smith

February 19, 2026

Webinar Objectives

- Provide information about the current timeline to NG911 deployment in Michigan
- Provide information about steps needed to be GIS-ready for 2026 deployment timeline
- Overview of NG911 GIS Repository and its role in the flow of GIS data to the ESInet
- Provide information on resources available through DTMB to get GIS-ready data into the statewide NG911 GIS Repository

FCC R&O Phase 1 – PFN Perspective

- Phase 1 requires the delivery of 9-1-1 calls to PFN in IP format (SIP)
- This is the first step necessary to receive true i3 NG911 calls with rich data information (think of it like the carriers connecting to us with a bigger/faster pipe so that they can send more information to us)
- The pipe has been made bigger/faster for multiple carriers, but we've not requested the new data yet, that's Phase 2
- Once the carrier connects via SIP (the bigger/faster pipe) testing must be conducted like the testing that was completed Jan 5-16th for ATTMO. We will verify that that information is still being sent correctly and that the call quality is good
- The testing must be completed for all carriers when they switch to SIP

FCC R&O Phase 1 SIP Connection Status w/PFN	
Carriers completed SIP connection	73.68%
Carriers in active process	2.63%
Carriers not completed	15.79%
Carriers Migrating to 3 rd Party Aggregator	7.89%



FCC R&O Phase 2 – PFN Perspective

- Phase 2 is next, it's when the location data is delivered and true routing based on location data obtained from the carriers is used to route the calls to your PSAP
- In order for the 9-1-1 authority to request Phase 2 several things must occur:
 - Phase 1 must be completed
 - The NGCS (INdigital) must be able to interface with a LIS provided by OSPs
 - An LVF must be put in place to verify addresses before a 9-1-1 call with an address is ever placed
 - An ECRF must be put in place that will assign the URI which will direct the call to the proper PSAP based on the location information provided by the carrier
 - Call Handling Equipment must be able to receive the new i3 format, there may be costs associated with this from your CHE vendor
 - This will need to be verified with your CHE vendor
 - Address points, road centerlines, and service polygons must be updated in the State Repository
 - The subscriber addresses must be validated by the OSPs against GIS data via LVF, so the NG Provider can route calls similar to MSAG, but instead of only records with a phone, all address points should be entered

What are impacts if GIS data is not in repository

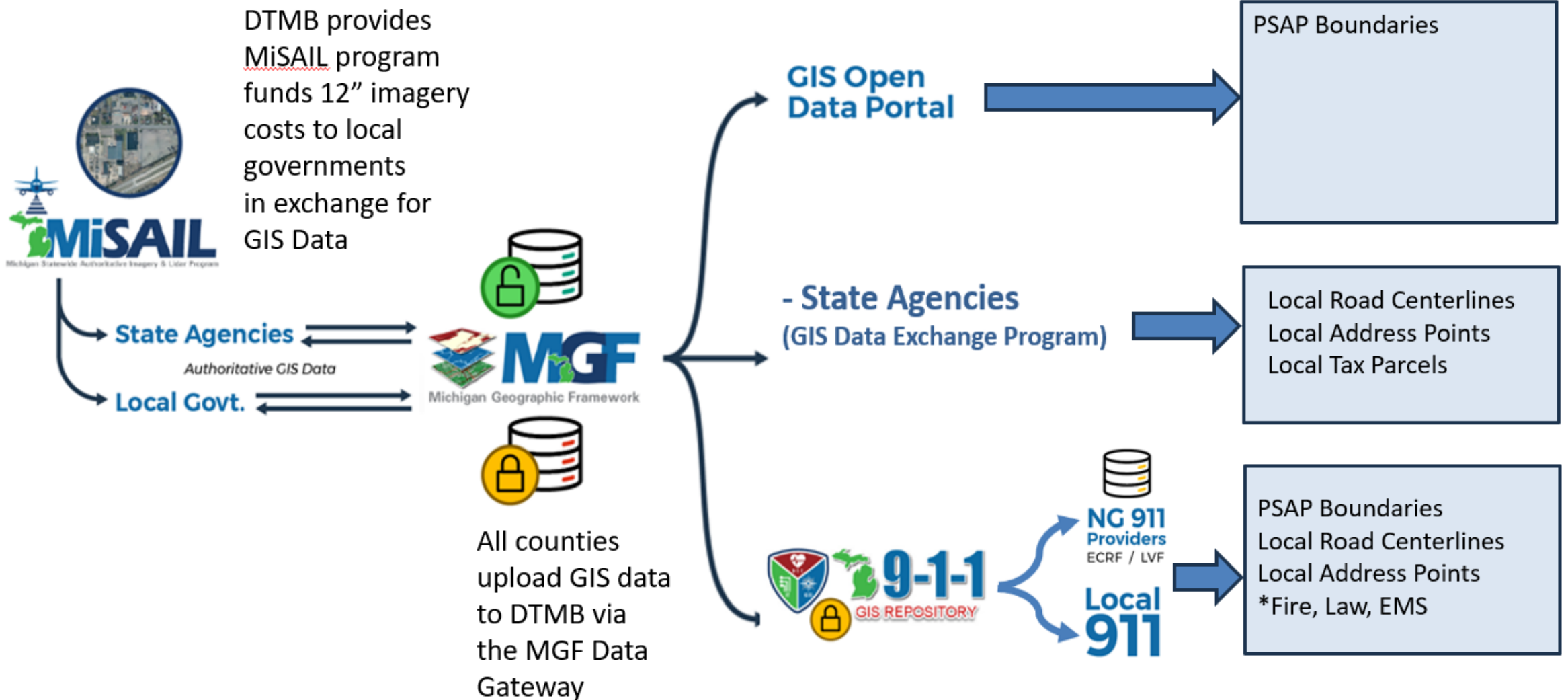
- Potential for calls to be misrouted
- Potential for caller location to not display
- Potential for call to default route
- Potential for caller location to be inaccurate because Originating Service Providers (OSPs) haven't pre-validated

NG911 GIS Repository – Where we are

- Launched in 2012
 - Road Centerlines
 - PSAP Boundaries
- Upgrade 2022
 - Address Points
 - Emergency Response Zones
- Statewide data aggregation platform GIS data for NG911
- Adheres to National Emergency Number Association (NENA) standards
- Provides data validations adhering to NENA guidelines
- Provides GIS data to NG911 service providers (PFN/INdigital)
- Allows access to PSAPs to export data
- Michigan has been a leader in developing statewide aggregated GIS data

NG911 GIS Repository – Where we are

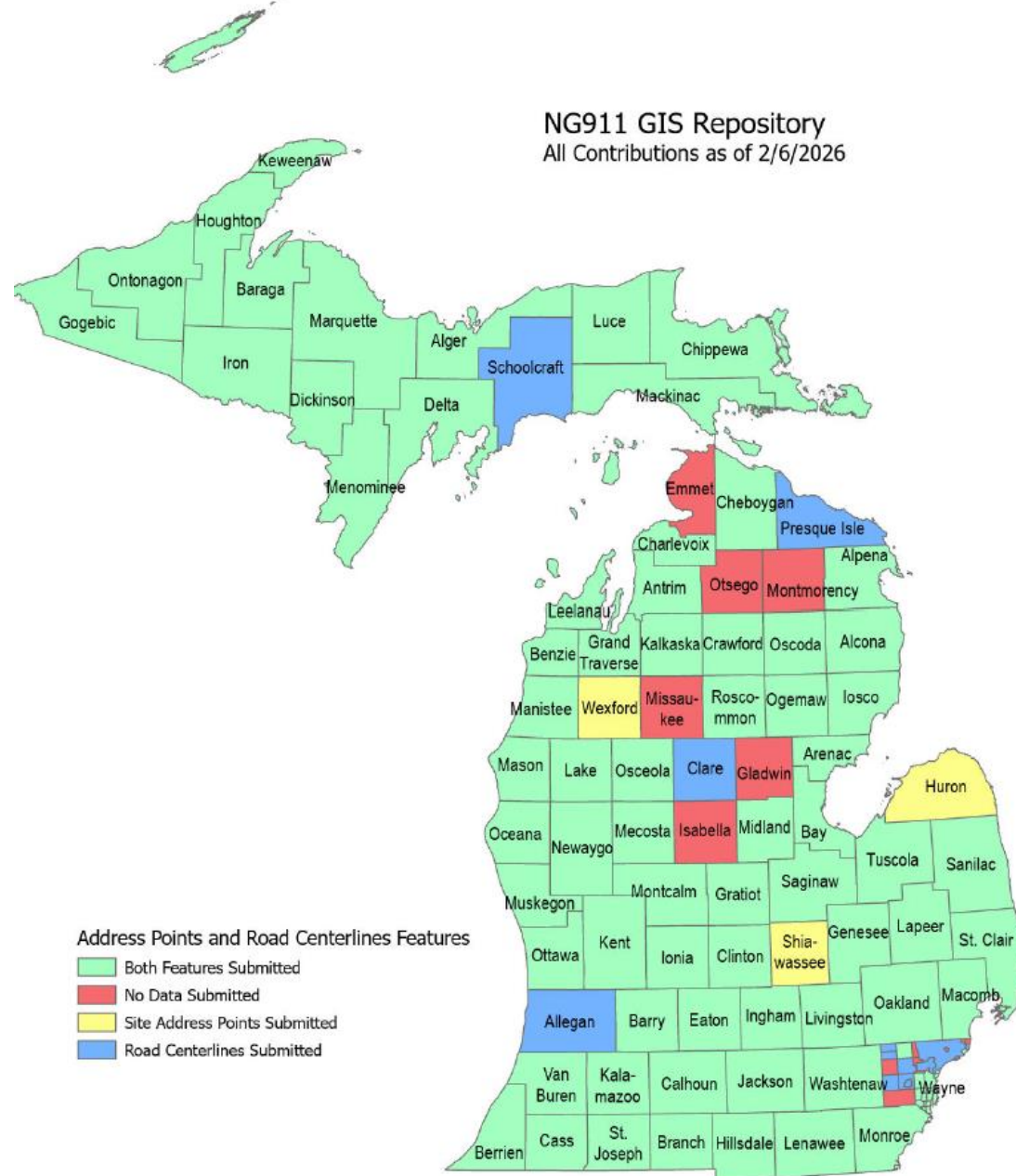
Current Workflow For GIS Data Sharing Between State and Local Govt



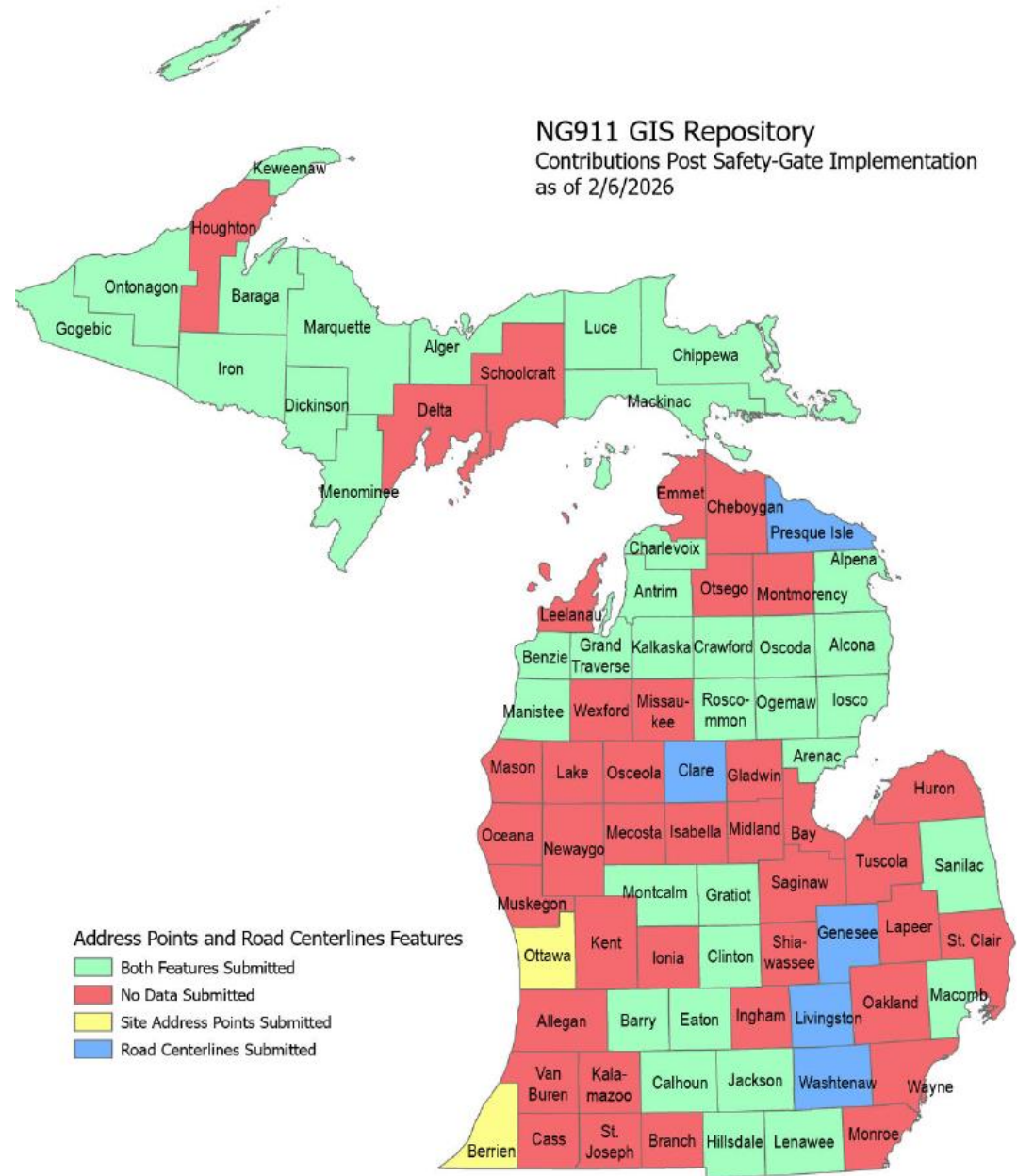
NG911 GIS Repository – Where we are

- Data adhering to NENA GIS Data Model 2.0
- Validations in place to increase data standardization and accuracy
- Started conversion to CLDXF street naming
- Workflows to provide GIS data to INdigital from NG911 GIS Repository
- Helpdesk and training resources, including office hours
- NG911 Working Group
 - Addressing Best Practices Guide development
 - Supporting documents
 - Continued coordination and outreach support

NG911 GIS Repository – Where we are



NG911 GIS Repository – Where we are



NENA Required GIS Datasets



ProvisioningPolygon - DTMB

PsapPolygon - DTMB

SiteStructureAddressPoint - Now

RoadCenterline - Now

FirePolygon – later 2026

EmsPolygon – later 2026

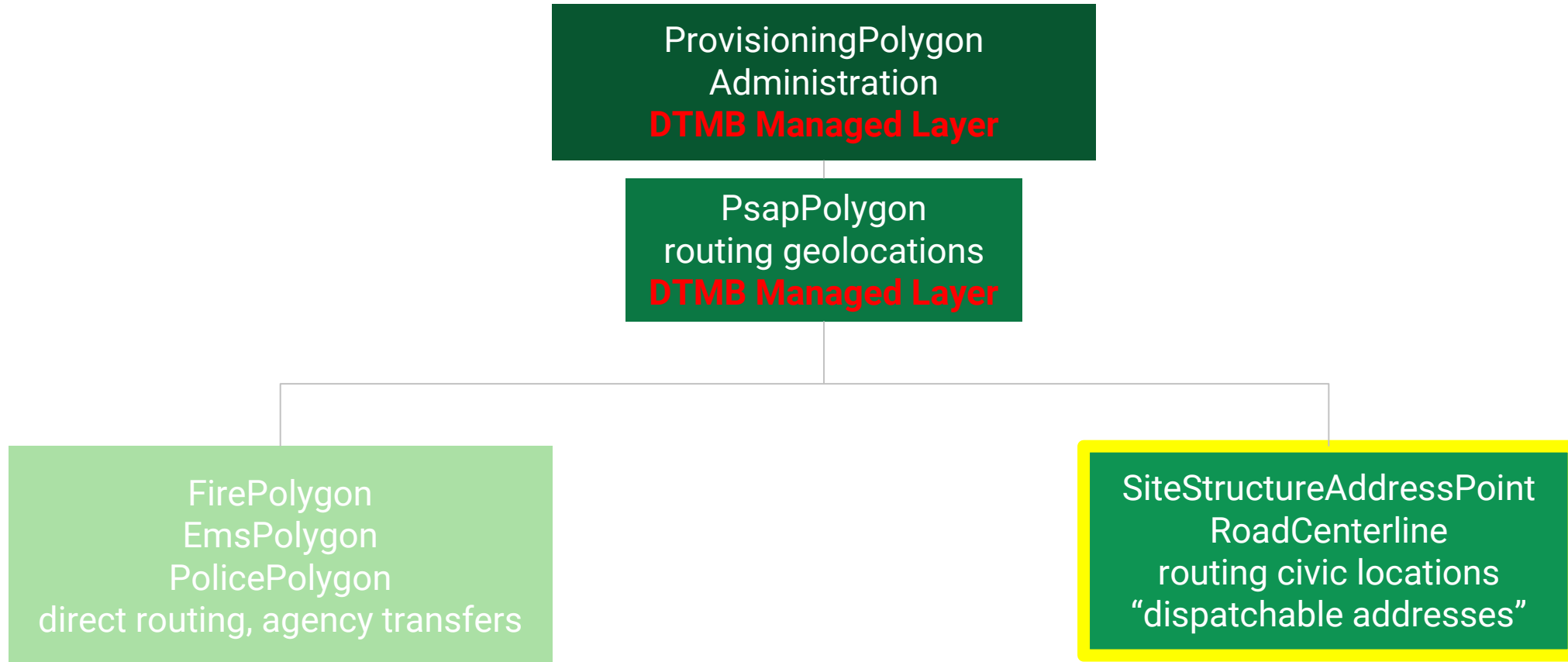
PolicePolygon – later 2026

NENA Standard for NG9-1-1 GIS Data Model

Abstract: This document defines the GIS data information, formats, requirements, and related information used in NENA Next Generation 9-1-1 (NG9-1-1) Core Services (NGCS).



NGCS Required GIS Datasets



Minimum Requirements: SiteStructureAddressPoint

Descriptive Name	Required	
Discrepancy Agency ID	Yes	dns.com
Date Updated	Yes	MM/DD/YYYY
NENA Globally Unique ID	Yes	SSAP##:dns.com
Country	Yes	US
State	Yes	MI
County	Yes	Any County
Incorporated Municipality	Yes	Any Township

Address Number Prefix	Conditional	
Address Number	Yes	123
Address Number Suffix	Conditional	B

Street Name Pre Modifier	Conditional	
Street Name Pre Directional	Conditional	North
Street Name Pre Type	Conditional	
Street Name Pre Type Separator	Conditional	
Street Name	Yes	Balsam
Street Name Post Type	Conditional	Lane
Street Name Post Directional	Conditional	
Street Name Post Modifier	Conditional	

Descriptive Name	Required	
Legacy Street Name Pre Directional	Conditional	N
Legacy Street Name	Yes	BALSAM
Legacy Street Name Type	Conditional	LN
Legacy Street Name Post Directional	Conditional	
Unit Type	Conditional	STE
Unit Number	Conditional	A

Postal Code*	Conditional	12345
ESN**	Conditional	
MSAG Community Name**	Conditional	

Required – An attribute value MUST be provided for the data field for each record. The data field MUST NOT be blank or null. Safety gates may not allow zero value for certain fields like address number

Conditional – If an attribute value exists, it MUST be provided. If no value exists for the attribute, the data field is left blank.

- * - Strongly recommended to provide postal code value for additional validation benefits
- ** - Needed for transition of MSAG and ALI to NG911

Minimum Requirements: RoadCenterline

Descriptive Name	Required	
Discrepancy Agency ID	Yes	dns.com
Date Updated	Yes	MM/DD/YYYY
NENA Globally Unique ID	Yes	SSAP##:dns.com
Country (L and R)	Yes	US
State (L and R)	Yes	MI
County (L and R)	Yes	Any County
Incorporated Municipality (L and R)	Yes	Any Township
Left FROM Address	Yes	101
Left TO Address	Yes	199
Right FROM Address	Yes	100
Right TO Address	Yes	198

Street Name Pre Modifier	Conditional	
Street Name Pre Directional	Conditional	North
Street Name Pre Type	Conditional	
Street Name Pre Type Separator	Conditional	
Street Name	Yes	Balsam
Street Name Post Type	Conditional	Lane
Street Name Post Directional	Conditional	
Street Name Post Modifier	Conditional	

Descriptive Name	Required	
Legacy Street Name Pre Directional	Conditional	N
Legacy Street Name	Yes	BALSAM
Legacy Street Name Type	Conditional	LN
Legacy Street Name Post Directional	Conditional	
Postal Code* (L and R)	Conditional	12345
ESN** (L and R)	Conditional	
MSAG Community Name** (L and R)	Conditional	
Parity (L and R)	Yes	O, E, B, Z

Required – An attribute value MUST be provided for the data field for each record. The data field MUST NOT be blank or null. Safety gates may not allow zero value for certain fields like address number

Conditional – If an attribute value exists, it MUST be provided. If no value exists for the attribute, the data field is left blank.

- * - Strongly recommended to provide postal code value for additional validation benefits and geocoding
- ** - Needed for transition of MSAG and ALI to NG911

Minimum Requirements: MSAG Community and ESN

A	B	C	D	E	F	G	H	I	J	K	L	M
Prefix Direction	Street Name	Street Suffi	Post Direction	Low Range	High Range	Community Name	State	Side	ESN	County ID	Exchange	General Use
	A	ST		12809	12970	LA SALLE	MI	B	117	115	MROM	LA SALLE TWP
	A	ST		1	12	FLAT ROCK	MI	B	127	115	FRK	BERLIN TWP
	A AVENUE			4300	4499	NEWPORT	MI	B	123	115	MROM	FRENCHTOWN TWP
	ABBAY	RD		1020	1064	MONROE	MI	B	118	115	MROM	MONROE TWP
	ABERDEEN	LN		100	152	MONROE	MI	B	110	115	MROM	RAISINVILLE TWP
	ABERDEEN	DR		8200	8499	LAMBERTVILLE	MI	B	113	115	7824	BEDFORD TWP
	ACRES	RD		6201	6598	OTTAWA LAKE	MI	B	104	115	7824	WHITEFORD TWP
	ADAMS	ST		826	1306	MONROE	MI	B	118	115	MROM	MONROE TWP

MSAG Community and ESN can be found in MSAG Table

Emergency Service Zone Polygon layer might exist in Computer Aided Dispatch system with ESN field that could be used to apply ESN to centerline and points



Minimum Requirements: servicePolygon

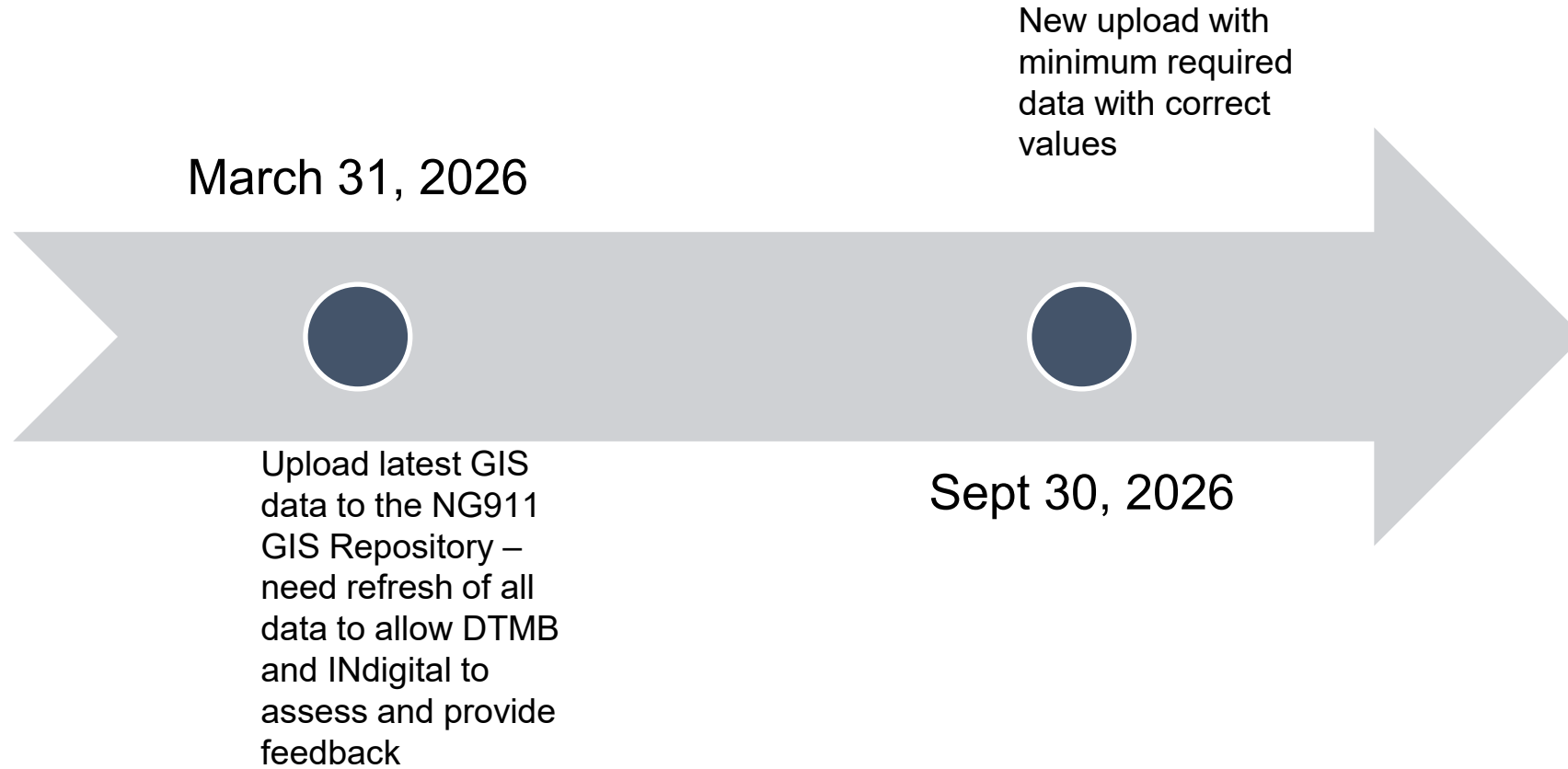
Uses of PsapPolygon, FirePolygon, EmsPolygon, PolicePolygon:

- routing calls to that service (e.g. alarm that would go right to fire dept.)
- aid in identifying appropriate response agencies

Descriptive Name	Required	Examples
NENA Globally UniqueID	Yes	pol:3184974:coronado.ca.us
Discrepancy Agency ID	Yes	coronado.ca.us
Date Update	Yes	DD/MM/YYYY
Display Name	Yes	Wexford Fire
Service URI	Yes	Sip:Wexford-fire@psap.allegheny.pa.us
Service URN	Yes	urn:emergency:service:sos:fire
Agency ID	Yes	TBD
AgencyVcard	Yes	TBD

DTMB will be requesting existing emergency response boundaries to assess building out statewide datasets

Timeline



NG911 GIS Repository – Next Steps

- **Need a complete statewide dataset**
 - If you have not uploaded your address points or road centerlines to the NG911 GIS Repository
 - Contact DTMB-NG911GIS@michigan.gov – set up office hours via Teams
- **Need data updates**
 - If you have not uploaded a version of your data within the past six months
 - Provide a new address point and road centerline upload via the MGF Data Gateway
 - Contact DTMB-NG911GIS@michigan.gov – to set up office hours via Teams
- GIS Training Session – Early March for GIS Data Importers – Notifications
- Office Hours – email DTMB-NG911GIS@michigan.gov
- Resources: <https://www.michigan.gov/dtmb/services/maps/michigan-statewide-ng911-repository>

NG911 GIS Repository – Keep in Perspective

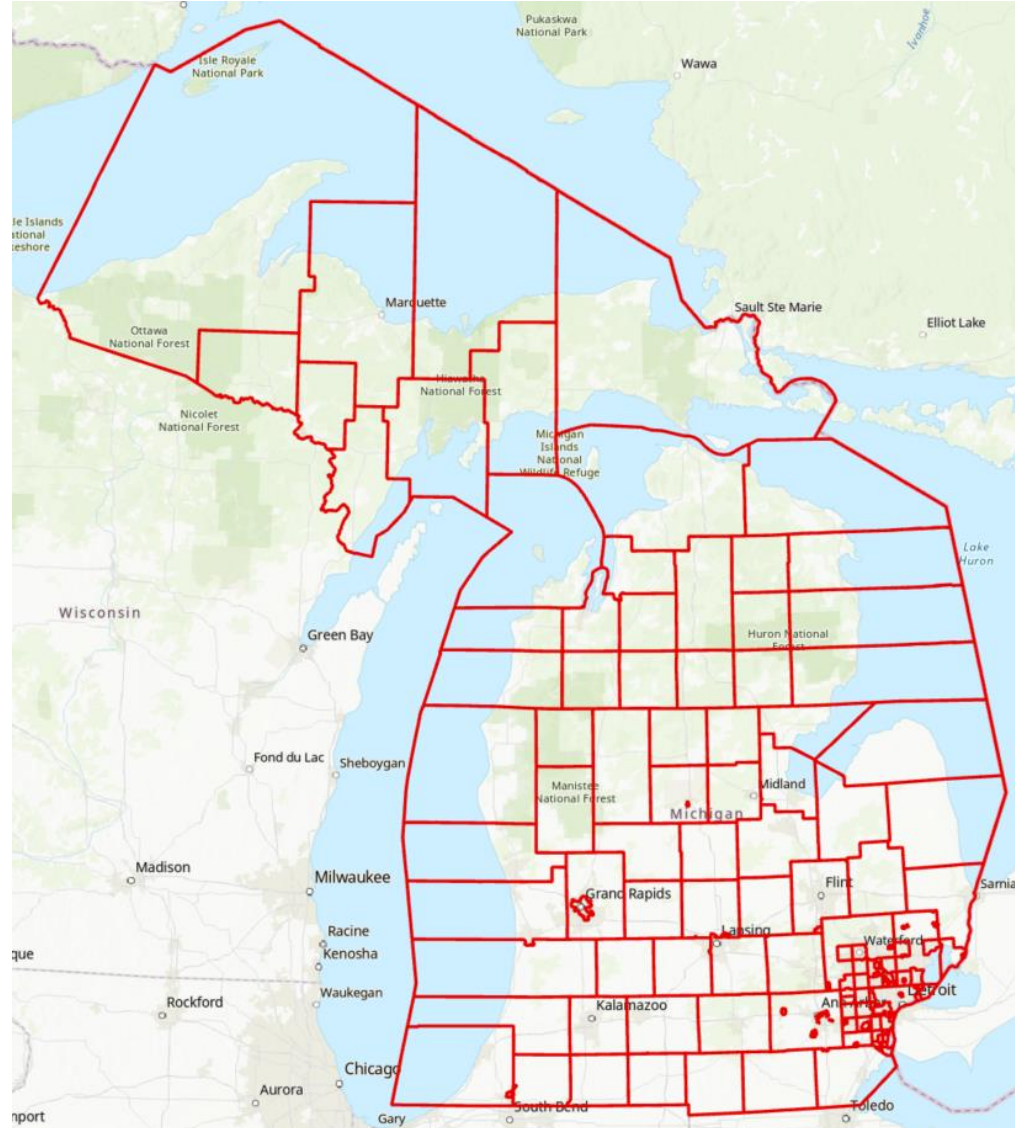
- Addressing data continuously changes – no perfect or complete data set
- Important to provide latest data
- Will allow for continuous feedback cycle
 - DTMB review, INdigital review, testing
- Questions – email DTMB-NG911GIS@michigan.gov

PSAP Boundary Review/Updates

GIS-based PSAP Boundaries in the NG911 Repository are now being used for the 911 geo-routing for wireless calls.

Important to inform DTMB GIS team of any changes to boundaries.

Please also review nautical boundaries for those PSAPs along Great Lakes

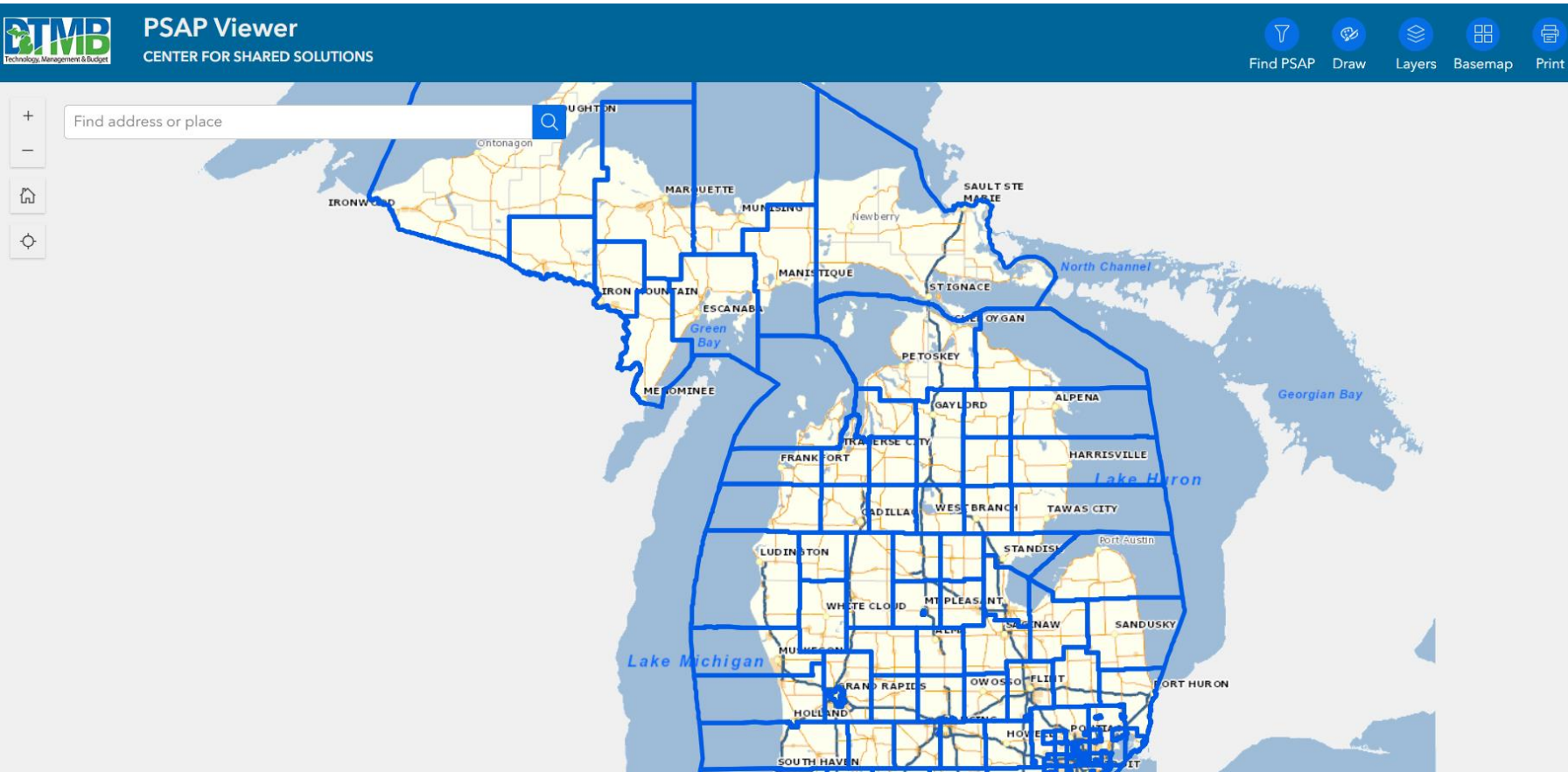


[PSAP Boundary Viewer](#)

Can navigate to your PSAP boundary to review boundary and draw change to email back to DTMB helpdesk at:

DTMB-NG911GIS@michigan.gov

PSAP Boundary Review/Updates



PSAP Boundary Viewer

Can navigate to your PSAP boundary to review boundary and draw change to email back to DTMB helpdesk at:

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PSAP Boundary Review/Updates

PSAP Viewer
CENTER FOR SHARED SOLUTIONS

Find PSAP Draw Layers Basemap Print

Find address or place

Draw

Preview

3 100 %

Show length measurement

COMMON COUNTY
COMMON COUNTY CENTRAL DISPATCH

OGEMAW COUNTY
OGEMAW COUNTY CENTRAL DISPATCH

Center for Shared Solutions, Department of Technology, Management, and Budget, State of Michigan

Powered by Esri

Use Draw tool to mark up map and capture screen shot to add to an email to our helpdesk. If change affects neighboring PSAP, please copy that PSAP Director on the email for the proposed change.

NG911 GIS Repository – Response Zone Assessment

Future Statewide Layers

- Emergency Response Zone polygon assessments – DTMB and INdigital
 - Fire
 - EMS
 - Police
- Might be an Emergency Service Zone polygon layer in 911 CAD system
- Need a current version of MSAG table or list of ESNs with response providers
- **Email will be sent to all GIS data importers with a checklist of what needs to be sent**
- More information will be provided at March training session
- DTMB planning to build statewide layers to manage topology and align to PSAP boundaries
- DTMB will contact counties with questions or other information needed after the assessment
- Long-term update process will be determined as part of assessment

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- Provide information on resources available through DTMB to get GIS-ready data into the statewide NG911 GIS Repository



Questions

Support email: DTMB-NG911GIS@michigan.gov

Presenter emails:

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