

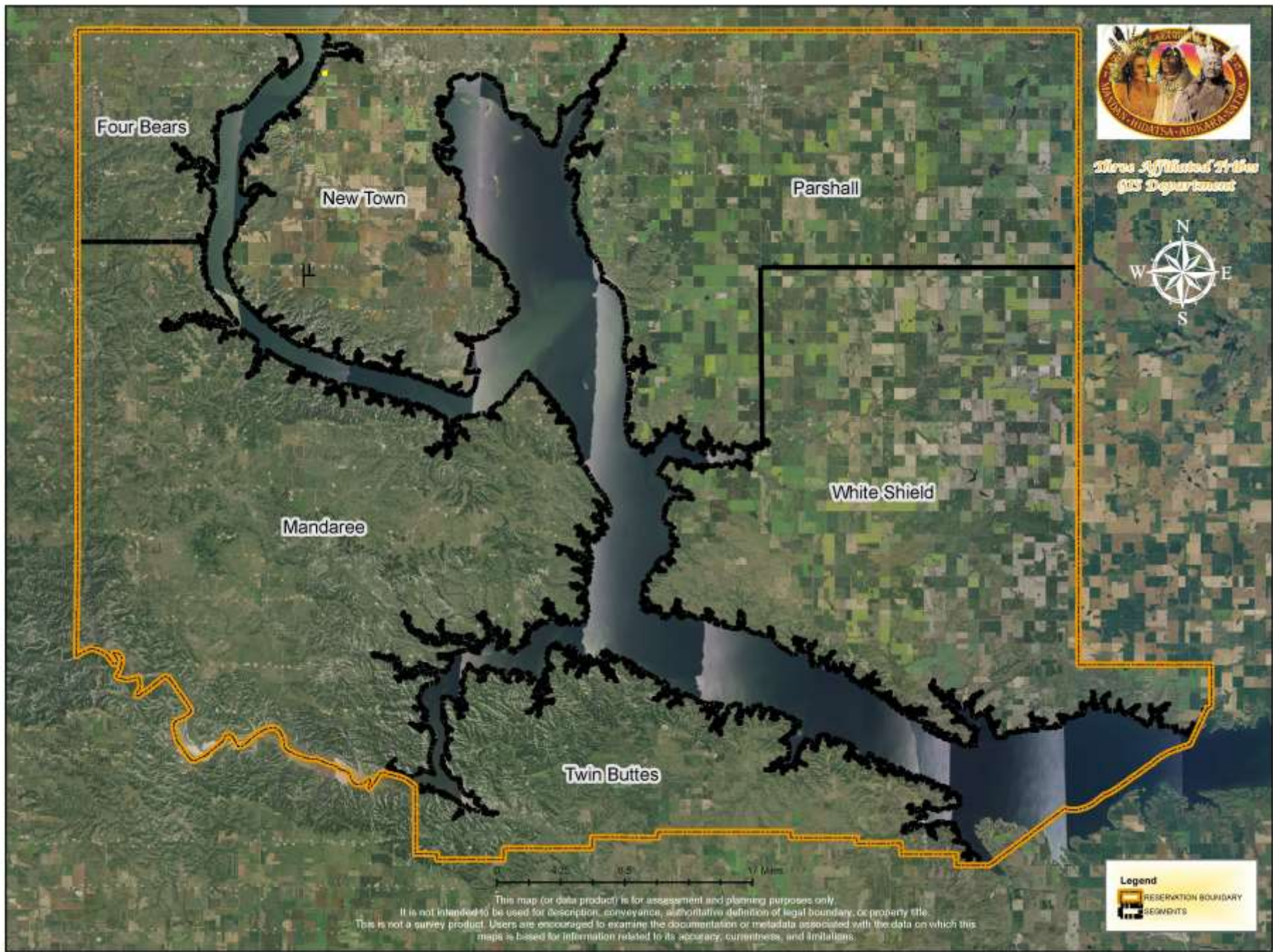
Transportation GIS Review

Tanya Sand-Driver

TAT GIS Director

Three Affiliated Tribes

- Fort Berthold Indian Reservation consists of 988,000 acres
- Divided by six segments: North, South, East, Northeast, West, and Four Bears Segment.
- Also divided by six counties: Dunn, Mercer, Mountrail, McKenzie, Mclean, and Ward.



North Segment-New Town



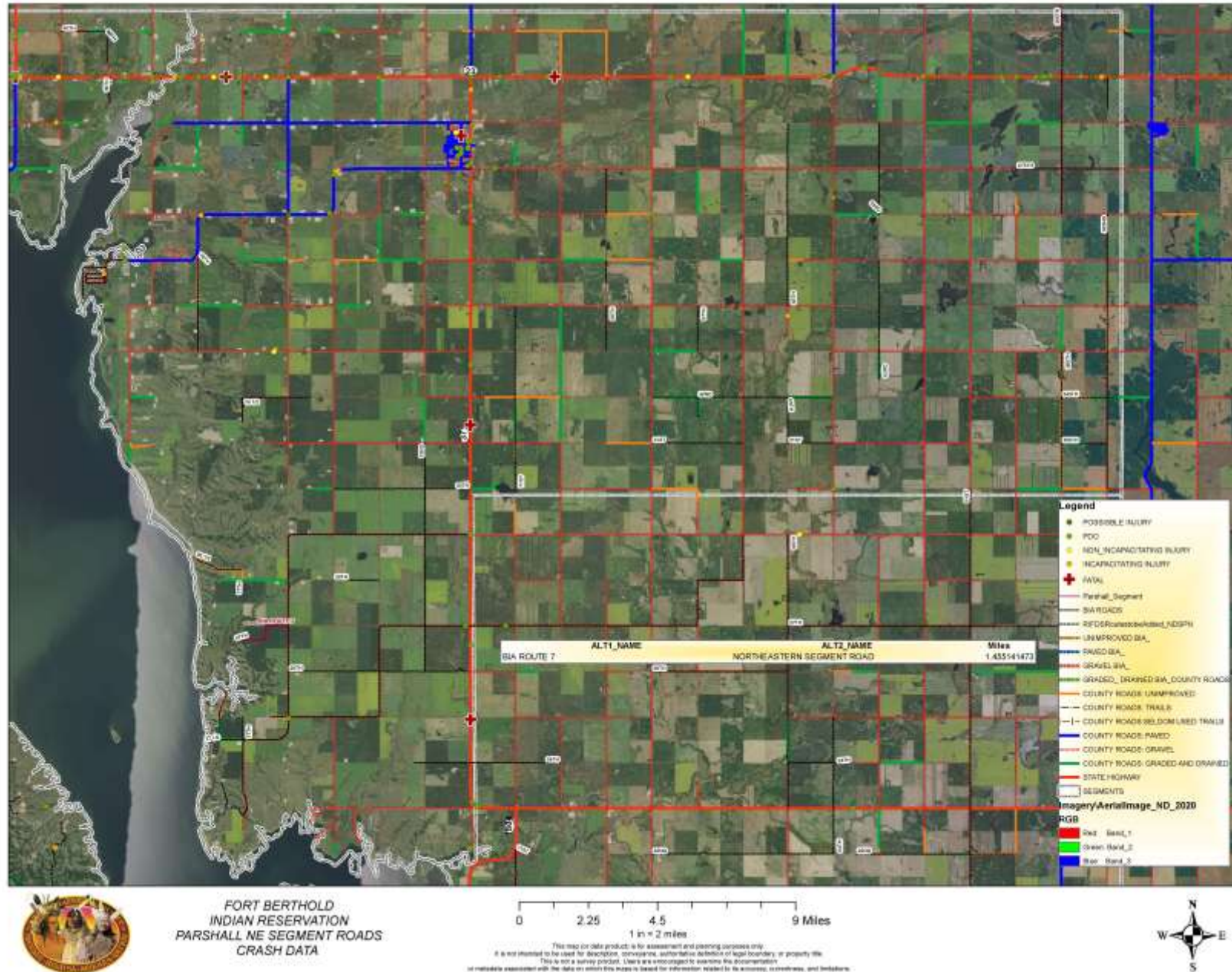
FORT BERTHOLD
INDIAN RESERVATION
NEW TOWN NORTH SEGMENT ROADS
CRASH DATA

0 1.75 3.5 7 Miles
1 in = 2 miles

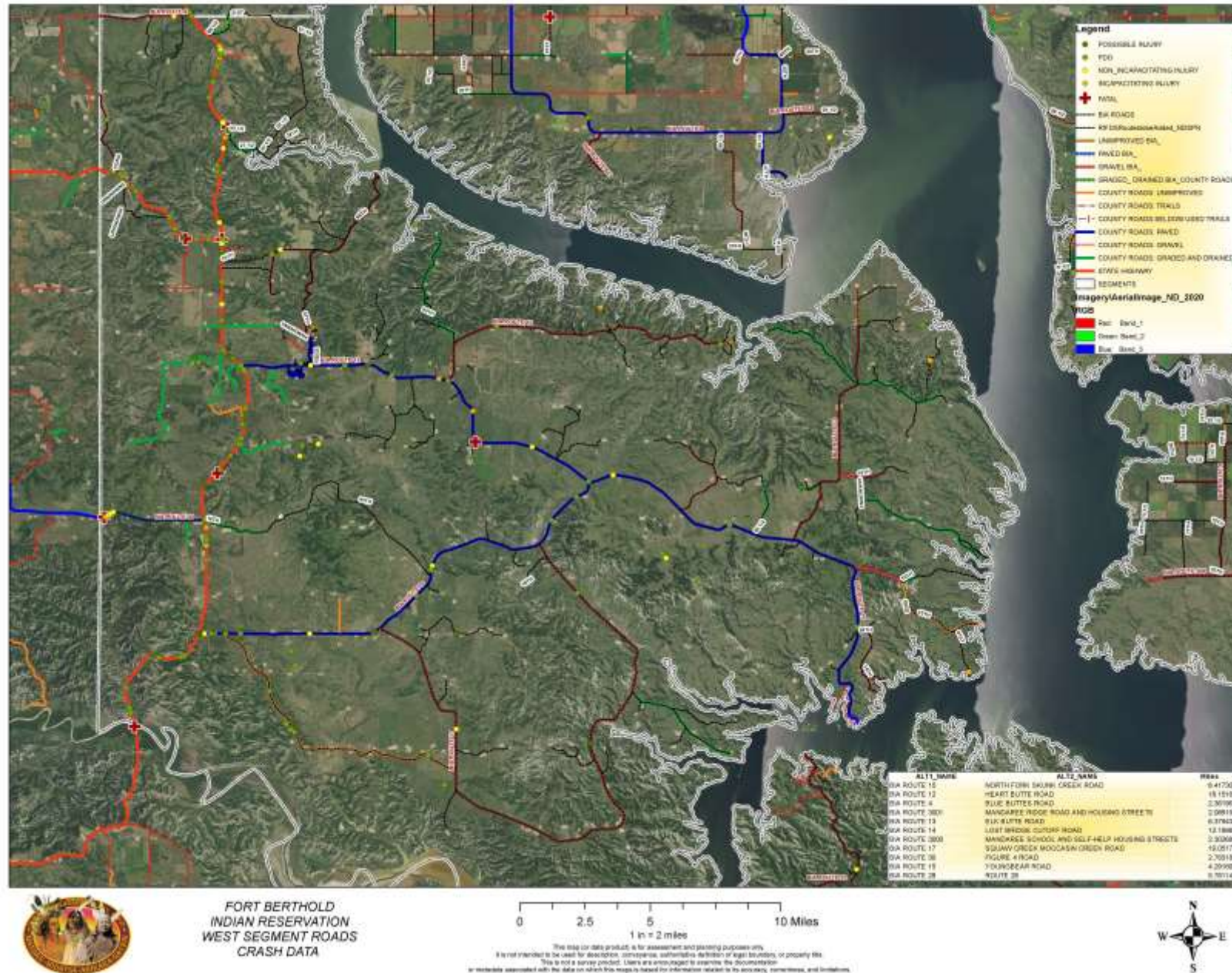
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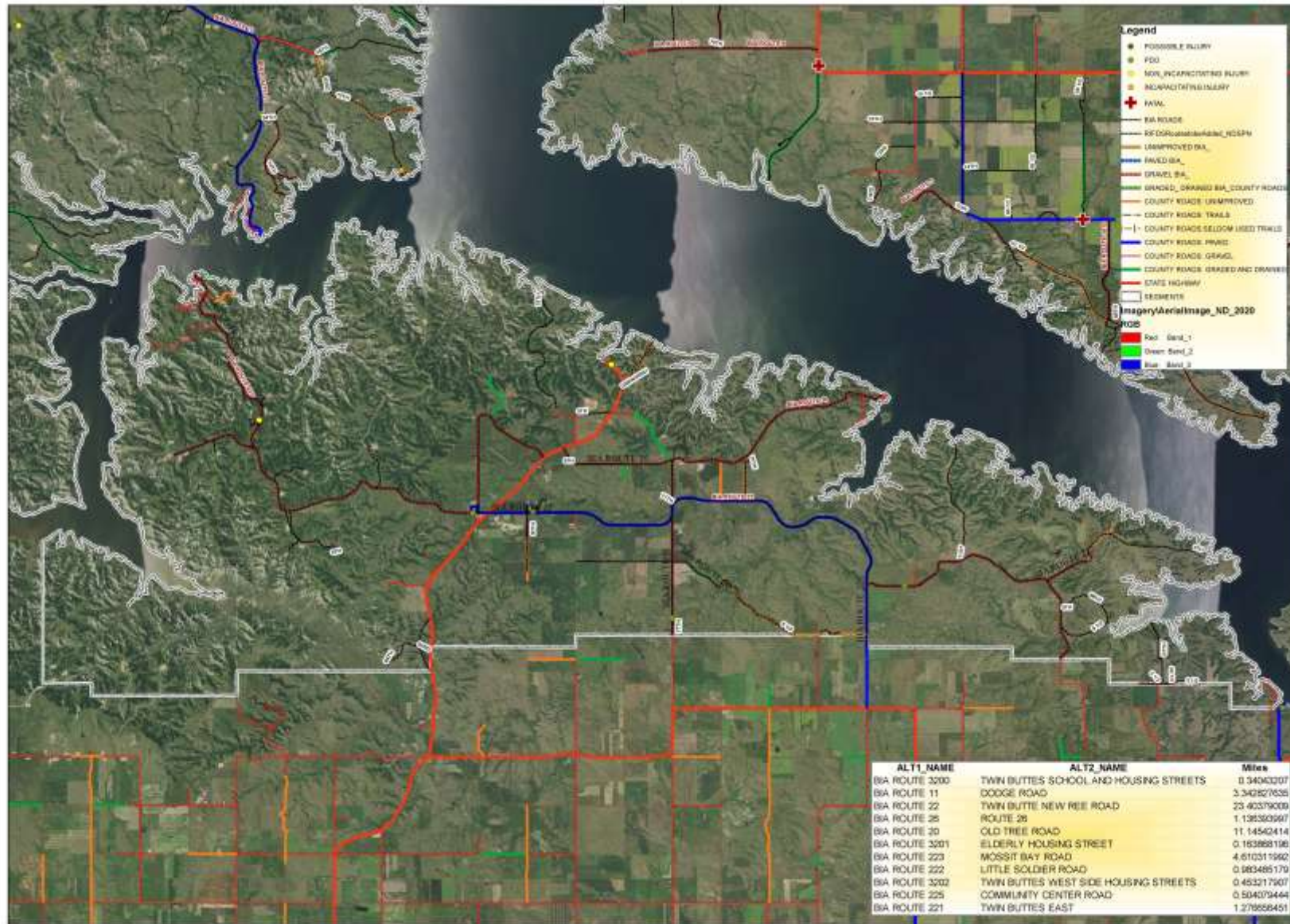
NorthEast Segment-Parshall



West Segment-Mandaree



South Segment-Twin Buttes



FORT BERTHOLD
INDIAN RESERVATION
SOUTH SEGMENT ROADS
CRASH DATA

0 2 4 8 Miles
1 in = 2 miles

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East Segment-White Shield

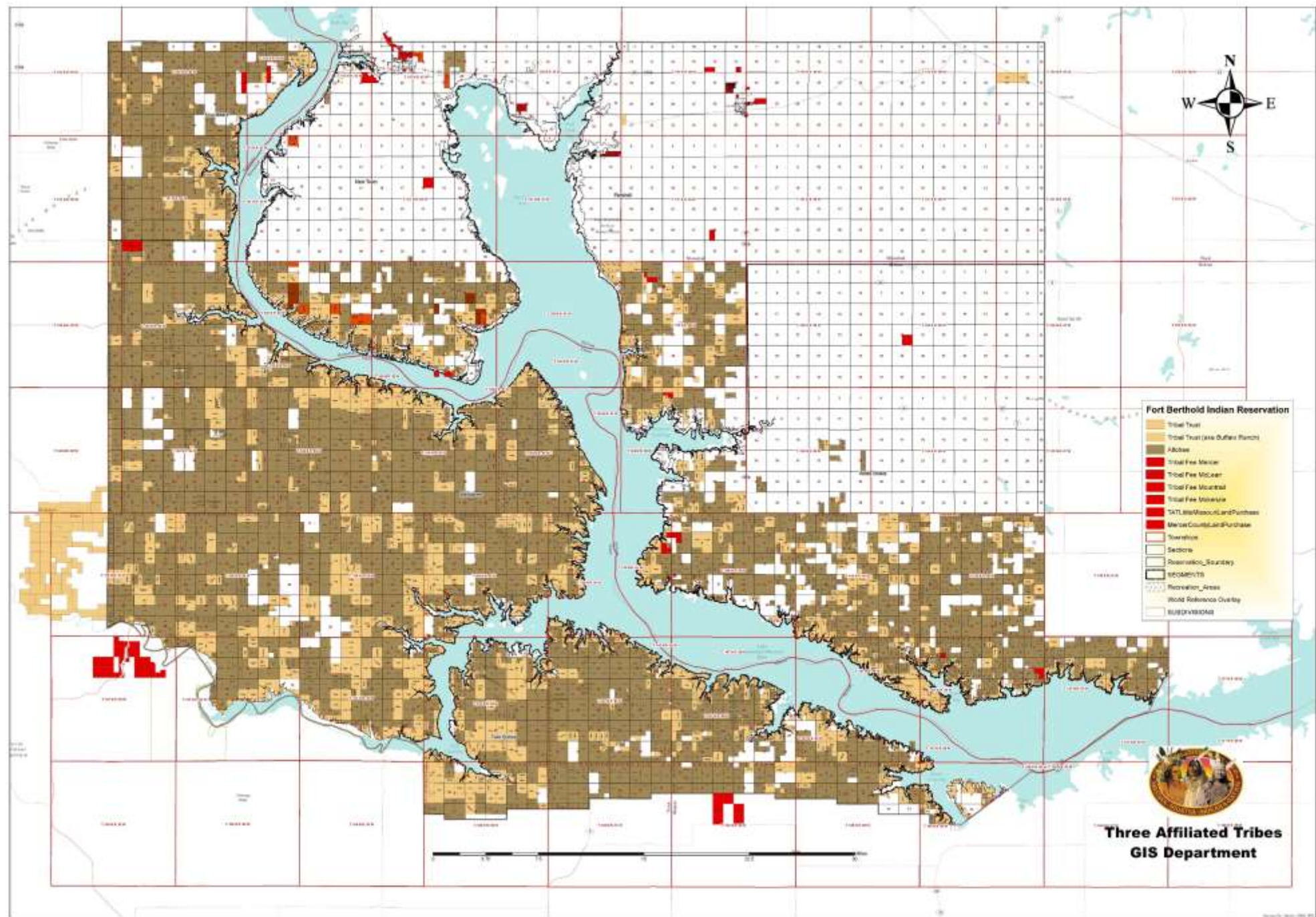


FORT BERTHOLD
INDIAN RESERVATION
EAST SEGMENT ROADS
CRASH DATA

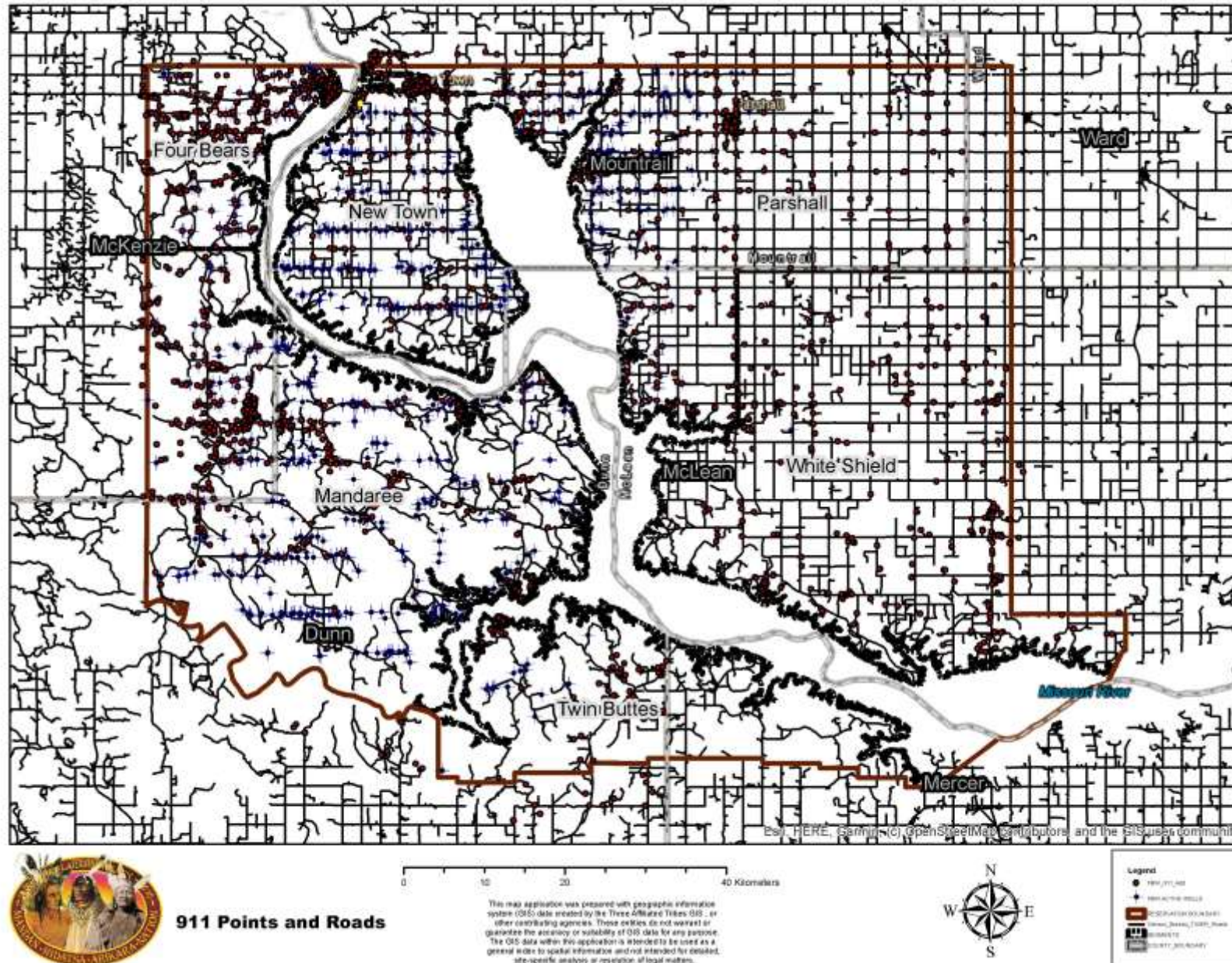
0 2.5 5 10 Miles
1 in = 2 miles

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Roads, 911 Points, Active Oil Wells



Demographic Segment Maps

- Available on the MHA Nation Website Department Directory under the GIS (Geographical Information Systems).
- <https://www.mhanation.com/geographic-information-systems>

GIS -Transportation Responsibility

- Upkeep of an accurate inventory of roads for the Three Affiliated Tribes.
- Cross referencing shapefiles and data from BIA, six counties, NDDOT, TIGER census for data accuracy
 - FBIR Road Lengths differ from other entities
- Road surface and type
 - Gravel, Paved, Trail, etc.
 - Maintained by:Tribe or County

Researching Right of Way

Requesting Title Status Report from BIA

Road Drawings

Georeferencing

Twin Buttes
Mandaree
Four Bears
New Town
Parshall
White Shield
Totals

Local Access		BIA		State		County		Municipal/ Tribal	
# of Routes	Mileage	# of Routes	Mileage	# of Routes	Mileage	# of Routes	Mileage	# of Routes	Mileage
16	9.8	52	50.1	1	8.1	42	33.1		
81	85.1	57	76.8	2	24.7	56	75.5		
32	22.7	11	11.4	2	18.2	26	24.7		
10	2.8	14	13.7	6	15.5	163	162.7	81	8.7
3	4.3	1	1.4	1	30.6	254	410.9	42	10
4	1.2	47	54.2	1	41.5	220	313.5		
146	125.9	182	207.6	13	138.6	761	1020.4	123	18.7

Miles 1511.2
Routes 1225

Grade and Drain
Gravel
Paved
Trail
Unimproved

White Shield		Parshall		New Town		Four Bears		Mandaree		Twin Buttes	
# of Routes	Mileage										
22	25.1	42	34.8	13	6.3	3	3.4	9	12	3	2.2
92	182.1	110	234.6	71	68.3	16	14.9	44	72.1	48	43.2
24	47.4	31	44.5	107	48.3	9	6.7	28	20.9	17	11.2
102	103.1	77	97.1	47	47.5	10	12.1	29	44.9	24	25.2
25	27.7	32	25.1	16	14.6	1	0.5	4	3.4	3	2.8
265	385.4	292	436.1	254	185	39	37.6	114	153.3	95	84.6

Miles 1282 mileage discrepancy is due inconsistent data
Routes 1059

- Road system and network is the foundation to many other GIS responsibilities to the Three Affiliated Tribes.
- Emergency Management
 - Ambulance, Law Enforcement, Fire;
- 911 Systems-Next Gen 911
 - 3 to 4 names for a road;
 - Emergency care delayed due to the question of fastest route
 - Counties use Burkle Addressing System; each county has a different Schema
- Homesites
 - Roads need to be named for an accurate 911 and delivery addressing with the county it is located in.
- Snow Routes
 - Maintenance of gravel and snow removal; enrolled members on a county maintained road.
- Elder Routes
- Bus Routes
- Access Roads to Well Sites
 - These roads not inventoried, Private Roads, ROW

Database Management

- RIFDs System
- GRIT System
- TAT Standalone

Ongoing Tasks

- Purchasing and upgrading Equipment for accuracy of field data
- Collaborating with TSRC (Tribal Safety Regulatory Commission)
- Collaborating with State Entities: NDDOT, 911
- Collaborating with County Offices for Roads, 911, Homesite, Land Ownership
- Drone Technology
- Quick Road survey, precise mapping, land surveys, inspections of bridges and road construction
- Training of staff working along with local engineers Brosz