

MISSAUKEE COUNTY ROAD COMMISSION

2023 ANNUAL REPORT



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OUR STAFF

The Board of Missaukee
County Road Commission

Jack McGee, Chairman
Kurt Bisballe, Vice Chairman
Tim Smith, Member

Manager
Brad Siddall

Finance Manager
Lynn Mulder

Payroll Clerk
Susan Kutzbach

Superintendent
Dennis Heuker

16 Drivers

Dale Wagner, Terry Eising,
Lan Bridson, Frank
Musselman, Ronald Murray,
Terry Pluger, Jim Gillow,
Alan Herweyer, Chad Moore,
Lisa Lutke, Adam Sloat, Joe
Kowalski, Mike Schneider,
Clint Bridson, Nick Winkel

Shop Supervisor
Walt Oram

3 Mechanics

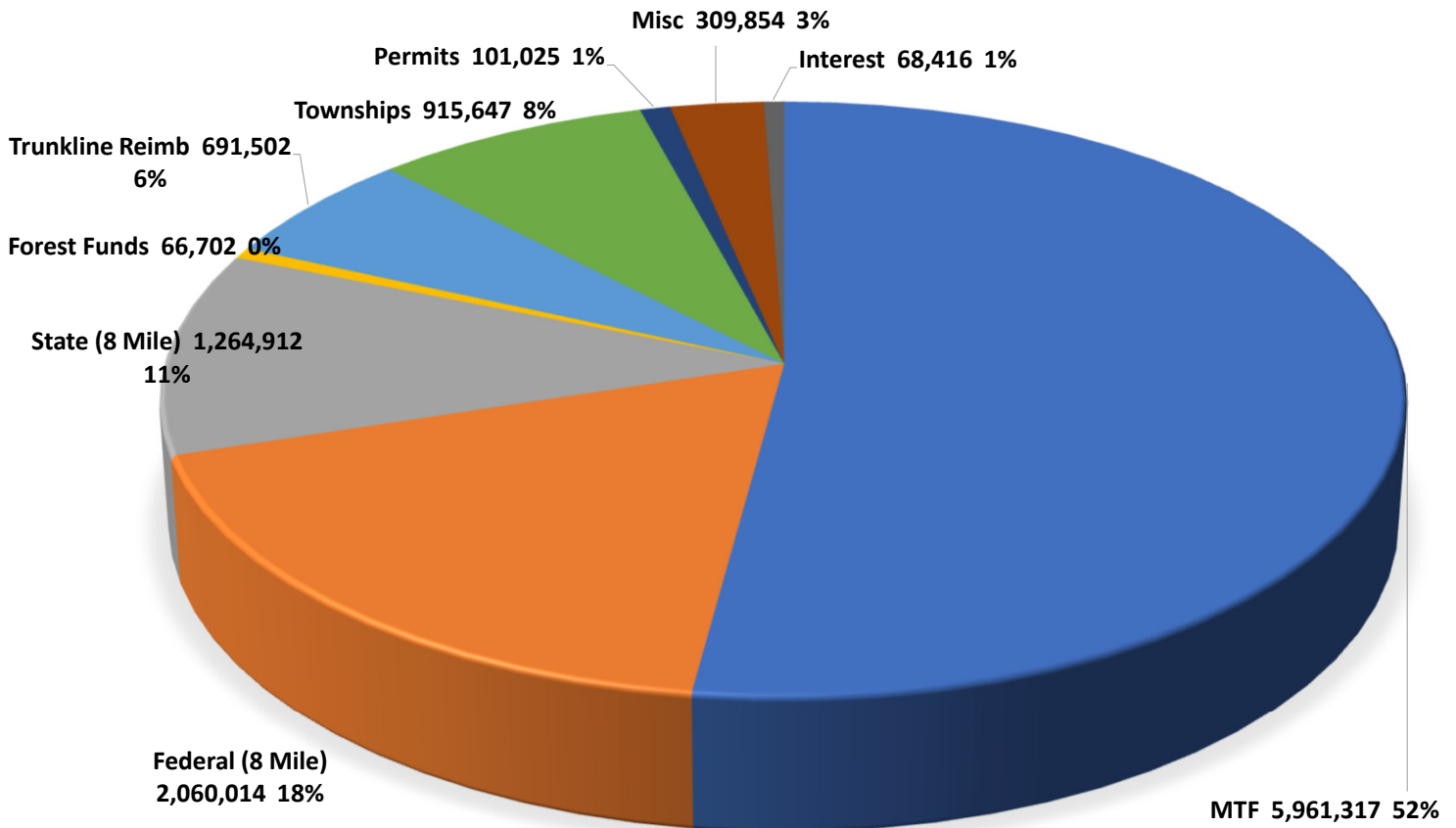
Nick DeRuitter, Dan Abfalter,
Tristan Siddall

MISSAUKEE COUNTY ROAD COMMISSION PERFORMS OR CONTRACTS FOR:

- ◆ *Dust Control*
- ◆ *Maintaining Seasonal Roads*
- ◆ *Grading Gravel Roads*
- ◆ *Patching Asphalt*
- ◆ *Placing Shoulder Gravel*
- ◆ *Roadside Mowing*
- ◆ *Removing Invasive Plants*
- ◆ *Monitoring ROW Work*
- ◆ *Plowing, Sanding, Salting Roads*
- ◆ *Tree/Brush Cutting in ROW*
- ◆ *Repairing/Replacing Guardrail*
- ◆ *Maintaining/Repairing Bridges*
- ◆ *Crushing, Shaping, Repaving*
- ◆ *Paving*
- ◆ *Sealcoating*
- ◆ *Marking Pavements*
- ◆ *Sealcoating*
- ◆ *Ditching*
- ◆ *Road Reconstruction*



2023 TOTAL REVENUE



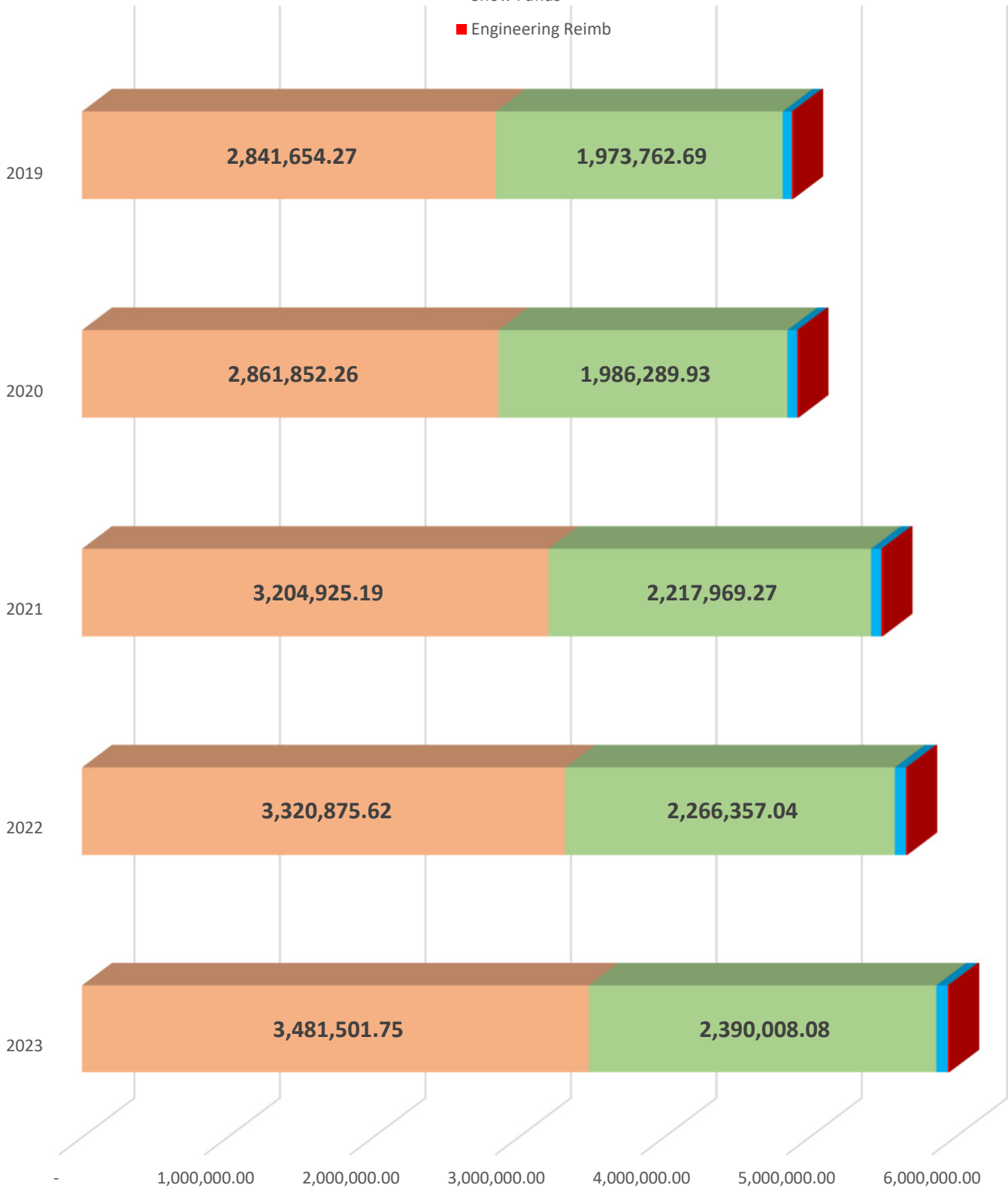
The Michigan Transportation Fund (MTF) is the principal source of road commission funding. The collected funds are distributed to Michigan Department of Transportation, cities and villages, and county road agencies using a formula based on variables that include the density of population, road mileage by classification and collected vehicle registration fees.

Other sources of revenue for the Missaukee Road Commission include:

- Forest Funds of approximately \$66,700 annually
- Federal and state funds for large construction projects (8 Mile Road)
- Reimbursement for state trunkline maintenance
- Bridge funds to replace or rehabilitate a bridge
- Private contributions from individuals or businesses (uncommon)
- Township contributions for paving, sealcoating or brining local roads
- Permit fees

Michigan Transportation Fund Revenue by Year

- Primary Road
- Local Road
- Snow Funds
- Engineering Reimb

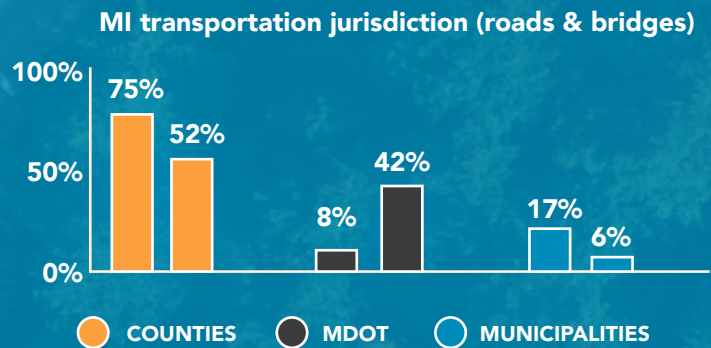


MI TRANSPORTATION FUND ACT

GET THE **FACTS**. FUND THE **ACT**. TO KEEP MI TRANSPORTATION **GOALS ON TRACK**.

This Act is built-to-last.

The MI Transportation Fund (MTF) Act is future-focused — governing how transportation taxes are deposited, prescribing how revenues are distributed and for what purposes funds can be spent.

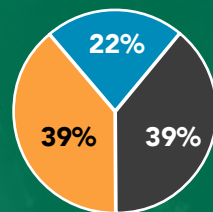


This Act is up-to-the-task.

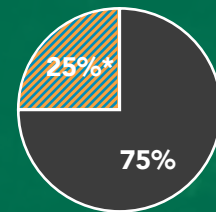
The Act has been modified many times over the years — responding to MI transportation needs.

306 amendments in 77 sections | **5** changes in the distribution formula
Last section amended in **2022**

Where do MTF \$\$ go?



Where do federal \$\$ go?



* 614 entities

Close the \$\$ gap to improve the 'good road' stats.

The Act is underfunded — and an annual increase of \$1.8 B will close the funding gap — to reach county transportation improvement and maintenance goals.

CRA has set twin goals for county roads:

Primary (Federal aid)

90%
GOOD/FAIR

Current ('21) rating:
52% Good/Fair*

Local (nonfederal aid)

60%
GOOD/FAIR

Current ('21) rating:
46% Good/Fair*

*Source: County Road Investment Plan, 2021



County Road Association
OF MICHIGAN

101 S. Washington Sq. | Ste. 200 | Lansing, MI 48933
517.482.1189

Learn more at micountyroads.org

SPEED LIMITS

WHO SETS SPEED LIMITS? State law assigns the responsibility for setting speed limits on county roads to the Michigan State Police in conjunction with road commission and township officials. In order for a speed limit to be changed, a traffic study must be done.

SPEED LIMIT MYTHS AND REALITIES:

Myth #1: Speed limits significantly affect traffic speeds. *Reality: Traffic speeds do not significantly change following the posting of new or revised speed limits. Most drivers travel at speeds that they consider safe, regardless of the speed limit.*

Myth #2: Most drivers travel too fast for road conditions. *Reality: The majority of drivers travel at prudent speeds and are capable of recognizing driving conditions that require greater driving caution.*

Myth #3: Lower speed limits result in safer roads. *Reality: The more uniform the speeds of vehicles in a traffic stream, the less chance there is for conflict and crashes. Speed limits that reflect the normal actions of the reasonable majority usually provide the most uniform speeds. In fact, unrealistically low speed limits may actually lead to crashes by producing 2 distinct groups of drivers—those attempting to observe the speed limit and those driving at what they feel is reasonable and prudent. These differences in speeds may result in increased crashes due to tailgating, improper passing, reckless driving and weaving from lane to lane.*

Myth #4: Lower speed limits allow for effective enforcement. *Reality: Unrealistically low speed limits cannot be enforced with reasonable enforcement. In addition, they make the behavior of the majority unlawful and create public antagonism toward the police. Realistic speed limits allow police to target their enforcement efforts to those drivers clearly out of line with the normal flow of traffic.*



2023 Primary Road Projects

Bituminous Overlay (Paving):

| | Road | Miles | Est. Cost |
|----------------------|---------------|-------|--------------|
| Bloomfield Township | Arnold Road | 3.50 | \$269,001.22 |
| Butterfield Township | Kelly Road | 0.50 | \$59,927.12 |
| Richland Township | Cadillac Road | 1.49 | \$144,448.89 |

Reconstruction:

| | Road | Miles | Est. Cost |
|----------------|---------------------|-------|-----------------|
| Aetna Township | 8 Mile Road-Phase 1 | 2.50 | \$ 1,787,520.09 |
| | 8 Mile Road-Phase 2 | 4.01 | \$ 3,119,527.97 |

2023 Local Road Projects

Bituminous Overlay (Paving):

| With participation from: | Road | Miles | Est. Cost |
|--------------------------|---------------|-------|--------------|
| Butterfield Township | Nelson Road | 1.99 | \$160,623.88 |
| Clam Union Township | Spoelma | 0.99 | \$89,355.86 |
| Lake Township | Kelly Road | 1.00 | \$91,829.46 |
| Richland Township | Brown Road | 1.01 | \$86,761.00 |
| | Geers Road | 1.00 | \$87,308.51 |
| Riverside Township | Meyering Road | 2.00 | \$179,210.77 |

Gravel Reconstruction:

| With participation from: | Road | Miles | Est. Cost |
|---------------------------------|-------------------------------|-------|--------------|
| Riverside Township/Autumn Vista | Turnerville Road | 0.51 | \$28,440.85 |
| Richland Township/Wexford CRC | Seeley * | 0.51 | \$184,874.00 |
| | <i>*Will be paved in 2024</i> | | |

Bridges:

| With participation from: | Bridge | | Est. Cost |
|--------------------------|-------------------|--|----------------|
| Holland Township | Dolph Road Bridge | | \$1,005,473.00 |

Planned Projects 2024 - 2026

2024 Planned Projects

| Project | Treatment | Miles | Est. Cost |
|--|--------------------------|--------------|--------------------|
| 13 Mile Rd from Kelly Rd to Lotan Rd | Crush/Shape/Pave | 1.00 | \$375,000 |
| Layman Rd from Burns Rd to Village of Jennings | Mill & Fill/Overlay | 3.50 | \$840,000 |
| Star City Rd from M-55 to Wagner Rd | Overlay | 2.50 | \$180,000 |
| Layman Rd from Oak Drive to Jennings | Overlay | 1.00 | \$40,000 |
| Cadillac Rd Bridge-Between McVety & Jeffs Rd | Preventative Maintenance | | \$100,000 |
| Various Primary & Local Roads | Sealcoat | 15.00 | \$537,000 |
| 13 Mile Rd from Lotan Rd to Blue Rd | Crush/Shape/Pave | 1.00 | \$300,000 |
| | | Total | \$2,072,000 |

2025 Planned Projects

| Project | Treatment | Miles | Est. Cost |
|--|--------------------------------|--------------|--------------------|
| 13 Mile Rd from Blue Rd to Finkle Rd | Crush/Shape/Pave | 3.00 | \$1,500,000 |
| 8 Mile Rd from Stoney Corners Rd to Prosper Rd | Crush/Shape/Pave | 3.50 | \$805,000 |
| Various Primary & Local Roads | Sealcoat | 10.00 | \$400,000 |
| Forward Rd Bridge-Replacement | Between Prosper & Falmouth Rds | | \$2,060,000 |
| | | Total | \$4,765,000 |

2026 Planned Projects

| Project | Treatment | Miles | Est. Cost |
|--|--------------------------|--------------|--------------------|
| Lucas Rd from Rhoby Rd to Phelps Rd | Crush/Shape/Pave | 2.00 | \$800,000 |
| Falmouth Rd from 13 Mile Rd one mile west | Crush/Shape/Pave | 1.00 | \$400,000 |
| Various Primary & Local Roads | Sealcoat | 15.00 | \$630,000 |
| 8 Mile Rd Bridge Between Stoney Corn & Geers | Preventative Maintenance | | \$440,000 |
| | | Total | \$2,270,000 |

Bridge Projects

| <i>Replacement</i> | | | |
|------------------------------------|------------|---------------------------|------|
| Bridge | Township | Cost | Year |
| Dolph Rd Bridge over Muskegon | Holland | \$1,005,473 | 2023 |
| Dorr Rd Bridge over Haymarsh Creek | Enterprise | 0 - Bridge Bundling | 2024 |
| Addis Creek over Dead Stream | Norwich | 0 - DNR | 2024 |
| Forward Rd Bridge over Clam River | Clam Union | \$1,200,000 (MCRC 20%) | 2025 |

| <i>Preventative Maintenance</i> | | | |
|---------------------------------|-------------|-----------|------|
| Bridge | Township | Cost | Year |
| Merritt Rd Bridge over Muskegon | Enterprise | \$214,000 | 2026 |
| Turnerville Rd Bridge over Clam | Riverside | \$150,000 | 2026 |
| Stevens Rd Bridge over Muskegon | West Branch | \$150,000 | 2026 |

Bridge Work Definitions

- * *Bridge replacement involves replacing the entire substructure, superstructure, deck and necessary approach work.*
- * *Rehabilitation is the major work required to restore the structural integrity of a bridge, as well as work necessary to correct major safety defects.*
- * *Preventative maintenance includes asphalt overlay, painting, pin & hanger replacement, slope paving repair, joint replacement/repair, crack sealing and similar improvements.*

Dolph Road Bridge Replacement



At The Start



In Progress



Bridge Removal



Finished Product



8 Mile Road Crush, Shape & Pave



At The Start

In Progress



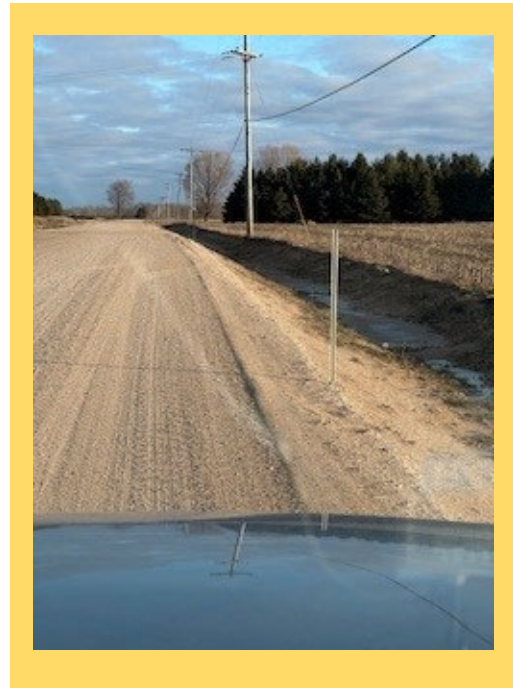
Open To Traffic

Turnerville Road Gravel Reconstruction

At the start



Constructing Ditches



Finished Product

Thank you Autumn Vista Dairy and Riverside Township for making this happen!

Nelson Road Overlay



A HISTORY OF WATER LEVELS ON LAKE MISSAUKEE

In October of 1941, after more than 10 years of receding lake levels, the Missaukee County Board of Commissioners petitioned the District Court to fix a normal water level for Lake Missaukee. The Court ordered that the normal water level be set at 1238.0 feet, although there was no method recommended for holding this level, nor how it was to be funded.

Over time, the ruling was largely forgotten.

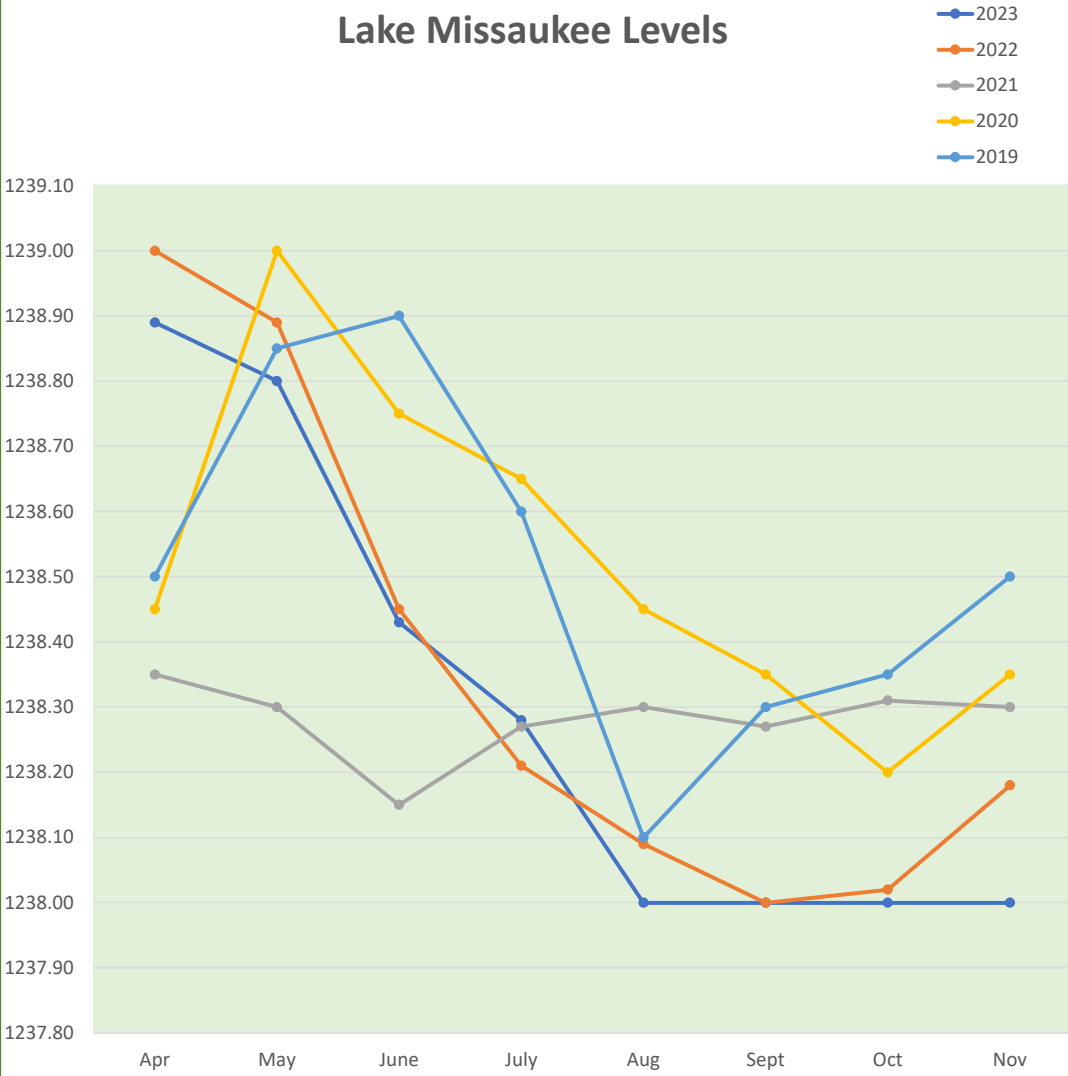
A complaint was filed by property owners in May of 1970 whose north shore property, which was developed during a period of low lake levels, was now being flooded by unusually high water. The lake level in March of 1970 was 1240 feet, two feet above the legal level. The District Court ordered the County to take emergency measures to lower the lake level. A structure to do this was to be in place by August of 1970.

There were more complaints filed, many appeals and other levels proposed. The final ruling stated that the level be raised to 1238.5 from February to July, where it stands today.

In 1972 the Missaukee County Board of Commissioners appointed the Road Commission as the Drain Commission and charged them with the task of monitoring and maintaining the lake level. The lake level is measured weekly during the spring, summer and fall months and the dam is manually adjusted in an attempt to get the level to the legal limit.

Factors that affect the lake level include snowfall amounts, rainfall amounts, draining of other lakes that flow into Lake Missaukee and evaporation in hot weather which all play a part in whether the lake can be kept at the legal limit or not.

5 Year History Lake Missaukee Levels



WINTER MAINTENANCE

Safe driving conditions are always a priority for the Missaukee County Road Commission, especially in the winter. In total, we are responsible for 921 miles of snow and ice control. Special attention is paid to bridge surfaces as they tend to freeze more rapidly. By constantly monitoring weather forecasts, we are able to meet winter's challenges and implement an effective winter maintenance plan.

During the winter, we utilize a 3-shift program by adding an afternoon and midnight shift and our managers rotate weekends on-call to ensure we have coverage at all times. Generally, plowing operations begin when slippery conditions exist or snow levels reach two inches on major roads. If snow continues to fall or is predicted, we are prepared to respond accordingly. Our drivers know they are always on call. At times they may begin work early or stay late. And they are always ready on weekends and holidays.

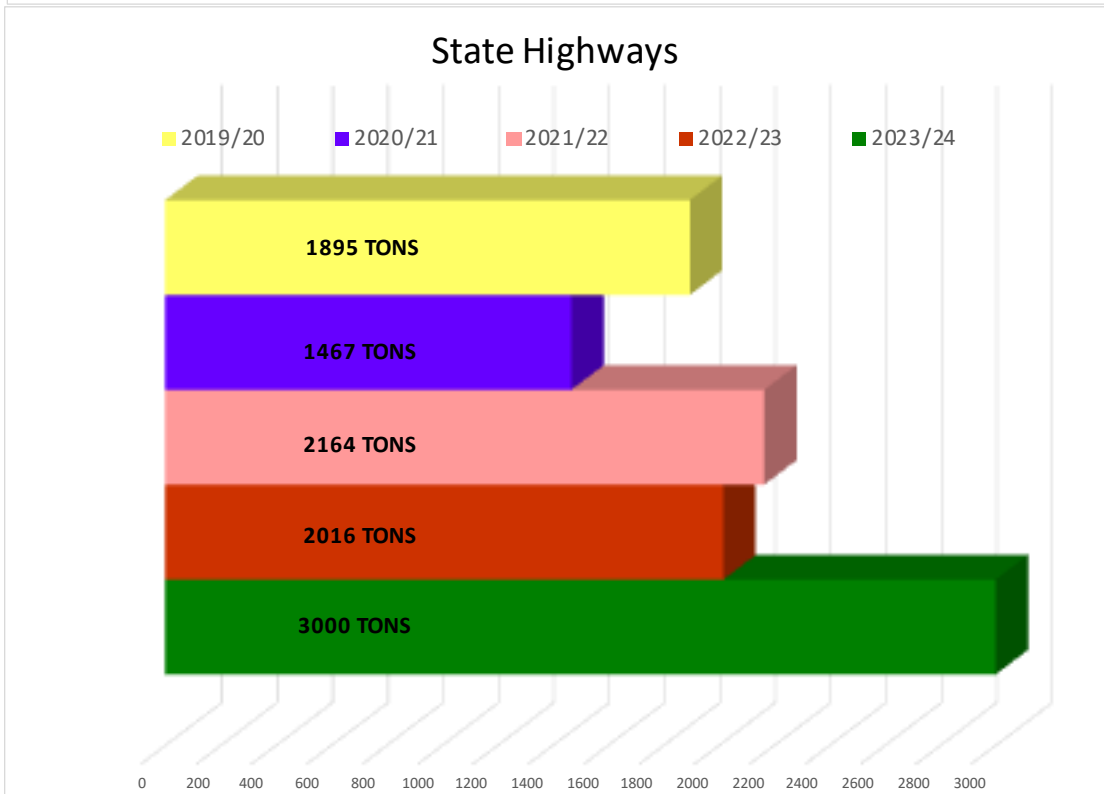
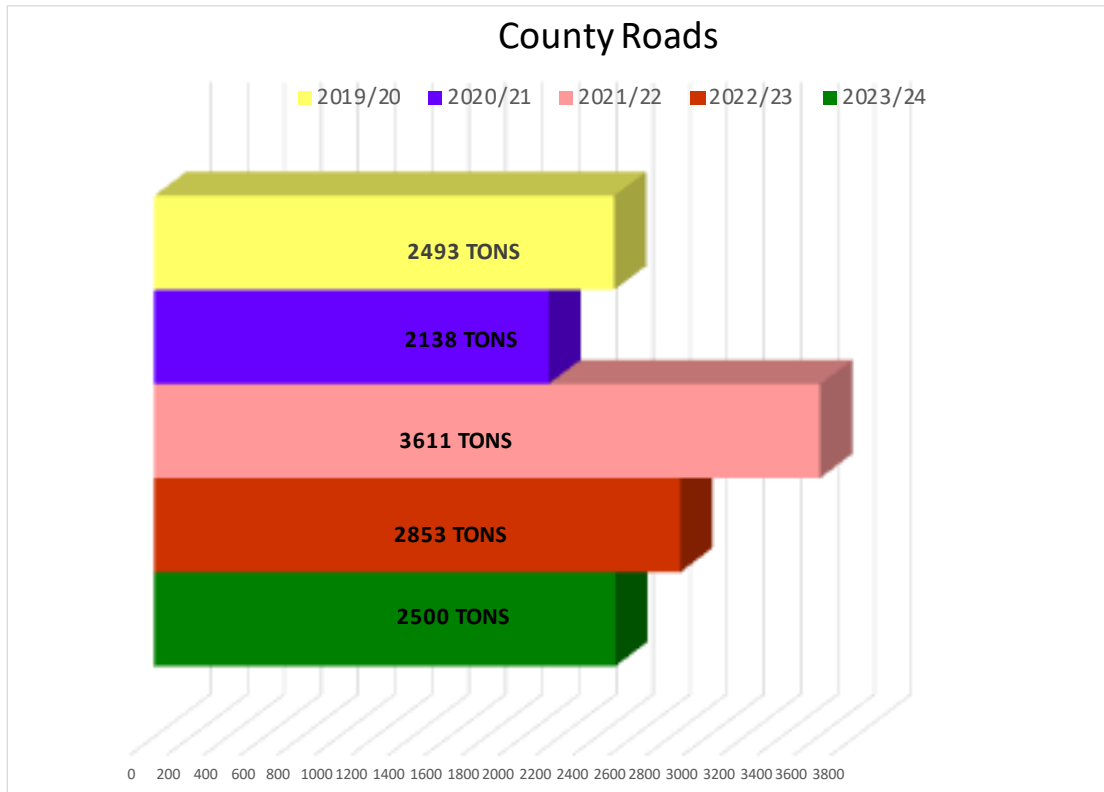
Salt, sand and liquid deicer (brine) are applied as moderately as possible, balancing the safety of the motoring public and environmental concerns. Salting and sanding every road is also cost prohibitive. More importantly, best practices indicate that road salt used to melt ice may potentially reach groundwater and wells. We have recently become aware that Michigan's Environment Great Lakes and Energy (EGLE) has detected elevated chloride levels in Michigan lakes statewide. Sand may impact the ability of storm drains to function properly. And salt is not effective when the temperature gets below 20 degrees.

Our drivers usually plow the most heavily traveled roads first. In order to be efficient and fiscally responsible, the order of plowing is: state trunklines first, then primary roads, next local roads, and finally subdivisions and dead end roads. In cases of heavy snowstorms, drivers must follow a route designed to plow the most roads in the least amount of time.

The Missaukee County Road Commission is proud of our drivers. They are conscientious and take pride in their work. Driving a 10-ton plow truck with snow swirling around, trying to avoid mailboxes and garbage containers, while trying to get to all the roads on their route cleared is not an easy task.

Many factors go into decisions regarding snowplowing and Michigan's unpredictable weather makes a difficult job even harder. We can never eliminate slippery or snow-covered roads but do our very best to make the roads as safe as possible.

WINTER SALT USAGE



MORE SALT

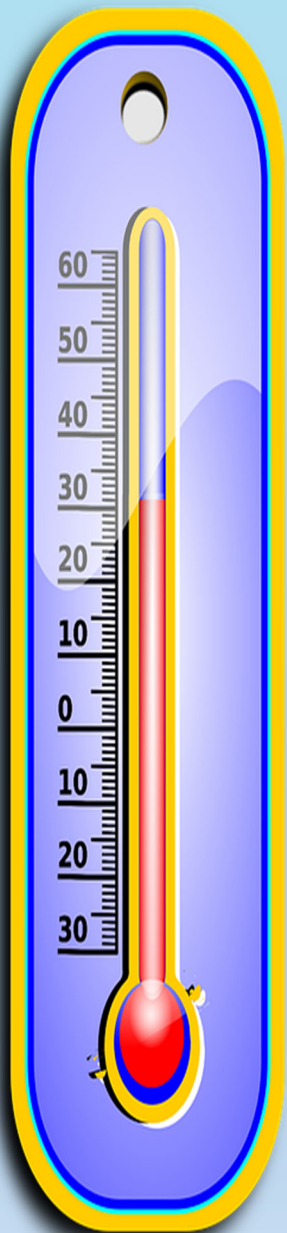
**...not always the cure
for slippery roads!**

30° Normal Winter Conditions

20° Salt takes longer to work
ROADS REFREEZE FASTER

10° ROADS REFREEZE EVEN FASTER
Ice melts very slowly

0° When salt is used at these lower
temperatures, it may cause wet
pavement to refreeze



THE EFFECT OF ELECTRIC VEHICLES ON ROAD FUNDING

In a report compiled by Anderson Economic Group, from 2019-2021, the state gas tax was short over 50 million dollars from what was expected in the road fund because electric vehicles (EVs) pay reduced or no state gas tax. EVs are expected to represent between 15-25% of new vehicle sales in Michigan by 2030, which could result in a shortfall of \$95 million in that year under current policy conditions. If drivers of traditional internal combustion engine (ICE) powered vehicles continue to bear nearly the entire tax burden for road maintenance, Michigan will be in an even worse position to restore its crumbling transportation infrastructure. The newly-formed Coalition on Electric Vehicles and Transportation Revenue is calling for a pilot project that will move Michigan toward a new and fair system of revenue collection for EVs. Immediate action is being called for to ensure we have road funding for the future and that the ramifications of the transition to EVs are carefully considered.

The report does not recommend one specific policy, but outlines multiple policy solutions including:

1. **Annual flat registration fees:** Since drivers of EVs pay a lower road user fee than ICE vehicles on average, increasing the registration fee for electric vehicles to match the counter-factual revenue generated from motor fuel tax paid by ICE vehicle owners may bridge the revenue gap and equalize the road user fee for electric and ICE vehicles.
2. **Mileage-based user fees:** Traditionally, taxes for road usage were designed to ensure that drivers in Michigan would be the ones to bear the cost of the state's maintenance for that privilege. Since MBUF is based on miles driven, it adheres to this ideal by ensuring payment toward road funding is commensurate with road usage.
3. **Per kilowatt-hour fees:** A PKHF is similar to the motor fuel tax and the MBUF in that it also ensures that drivers pay for road usage proportionately. PKHF measures road usage based upon the units of electricity used instead of miles driven.
4. **Miles at registration fees:** This type of mileage-based user fee requires EV owners to provide their mileage to the Secretary of State through odometer readings reported during annual registration.
5. **Tolling:** Toll roads could help generate revenue by charging fees to road users regardless of the type of vehicle, or the driver's residency status. However, because toll roads are expensive, time consuming, and potentially inefficient, they are not feasible as a sole solution.

"For decades, Michigan has been underfunding necessary fixes for our roads, and with the rise of electric vehicles, the revenues necessary for road projects collected at the gas pump will continue to decline," said Rob Coppersmith, Executive Vice President of the Michigan Infrastructure and Transportation Association. "We need action from Michigan's leaders to rethink how we fund our roads and it's time for everyone to come together to support an equitable, long-term infrastructure plan that recognizes the new realities Michigan faces."

