



Lake County Board | Committee of the Whole
May 9, 2025

LAKE COUNTY BOARD STRATEGIC PLAN

Adaptive Infrastructure Update

Presented by:

County Administrator's Office

Division of Transportation

Facilities and Construction Services

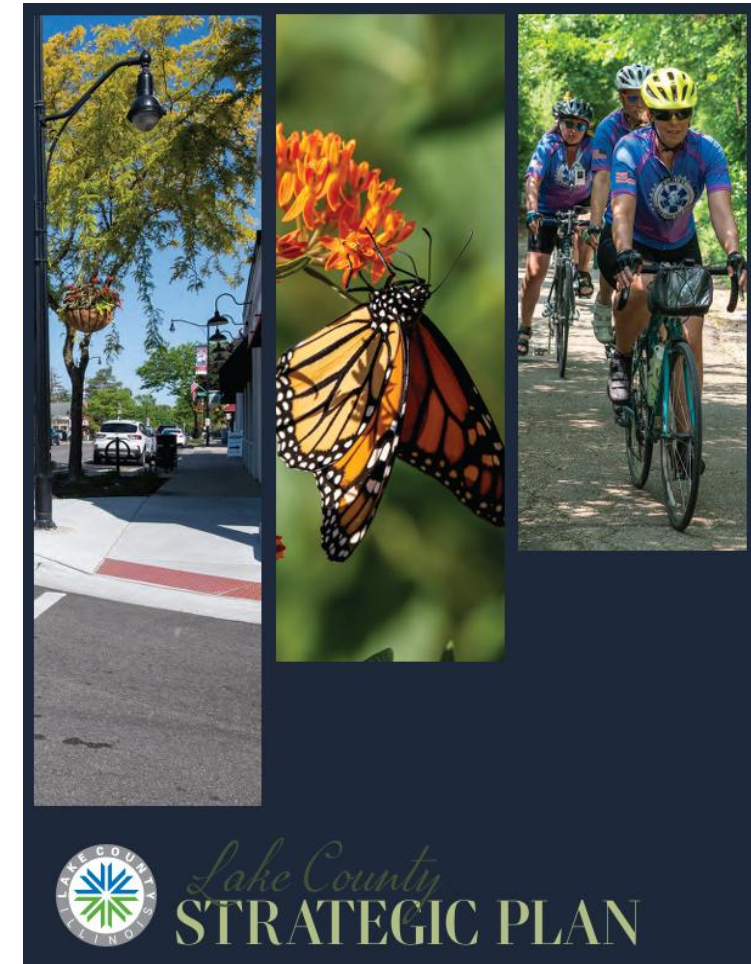
Public Works

Stormwater Management Commission

Lake County's Strategic Plan



- Adopted September 7, 2023
- Sets out Strategic Priorities, including:
 - Safe Communities
 - Economic Opportunities
 - **Adaptive Infrastructure**
 - Sustainable Environment
 - Healthy and Inclusive Communities
 - Superior County Operations and Services





Strategic Priority:

Adaptive Infrastructure

Goal Statement:

Develop and implement modern infrastructure solutions that are equitable, adaptive, safe, and sustainable.

Strategic Priority: Adaptive Infrastructure

Strategies:

1. Provide County facilities, infrastructure, and technology to meet the ever-changing and evolving needs of and demands upon Lake County.
2. Develop and implement multi-modal transportation solutions for the efficient and safe movement of people, goods, services that supports the local economy and promotes the reduction of single-occupied vehicle travel.
3. Implement new and emerging technologies and applications that support responsible development and enhance the capability, resiliency, and safety of infrastructure systems.
4. Advance regional infrastructure solutions and services in partnership with and through the support of federal, state, and local agencies.



Provide County facilities, infrastructure, and technology to meet the ever-changing and evolving needs of and demands upon Lake County.

Performance Measures:

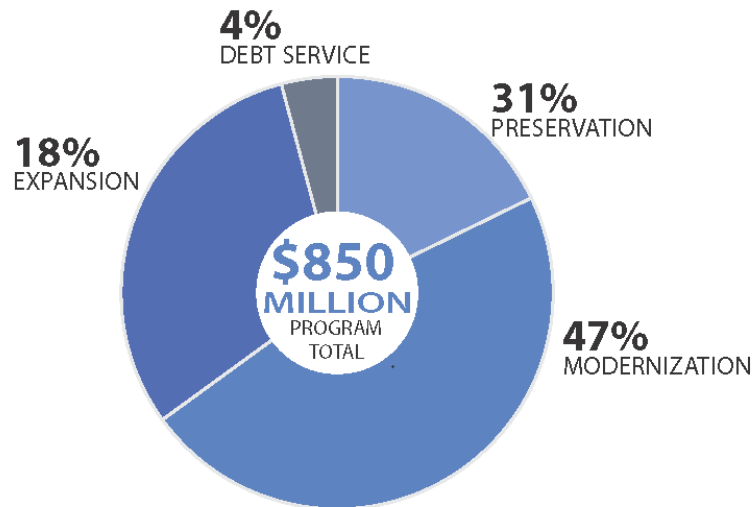
- **Develop and update annual Capital Improvement Plans**



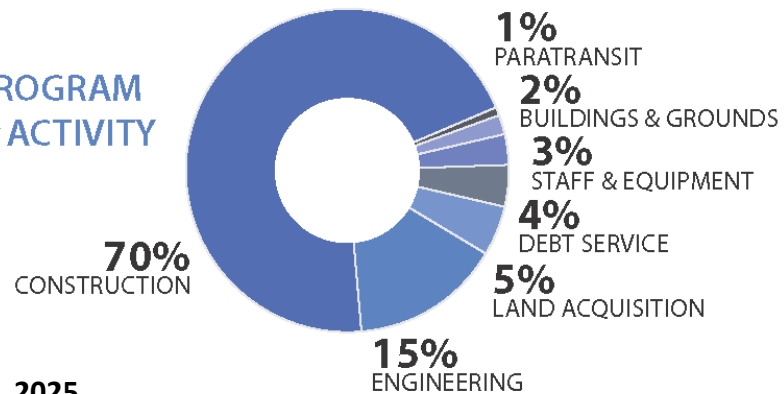
Strategy 1:

Transportation Improvement Program (2024-2029)

PROGRAM BY WORK CATEGORY



PROGRAM BY ACTIVITY



ROADS AND BRIDGES

\$103M
RESURFACING PROJECTS

62.7
CENTERLINE
MILES



18 INTERSECTION IMPROVEMENT
PROJECTS

\$109.8M



\$38M
7 NEW ROUNDABOUTS



1 RAILROAD GRADE
SEPARATION
2 RAILROAD GRADE
SEPARATION
FEASIBILITY STUDIES



\$11.8M
17 CULVERT REHAB OR
REPLACEMENT

TECHNOLOGY, SIGNALS, AND SAFETY INITIATIVES

\$15.5M
Lake County
PASSAGE
ENHANCEMENTS



\$1.4M
NEW SIGNALS AT
2 INTERSECTIONS



60+ MILES
CENTER AND
EDGE LINE
RUMBLE STRIPS

BIKE AND PEDESTRIAN ACCOMMODATIONS



\$110M
(13% OF
PROGRAM TOTAL)

SHARED USE PATH
• 41 MILES NEW • 16 MILES IMPROVED

SIDEWALK
• 24 MILES NEW • 3 MILES IMPROVED

BIKE FRIENDLY SHOULDER
• 19 MILES NEW • 9 MILES IMPROVED



WAYFINDING
SIGNAGE
PROGRAM

RIDE LAKE COUNTY

EXPANDED
COUNTYWIDE
PARATRANSIT
SERVICE



Construct Regional Operations & Communications Facility

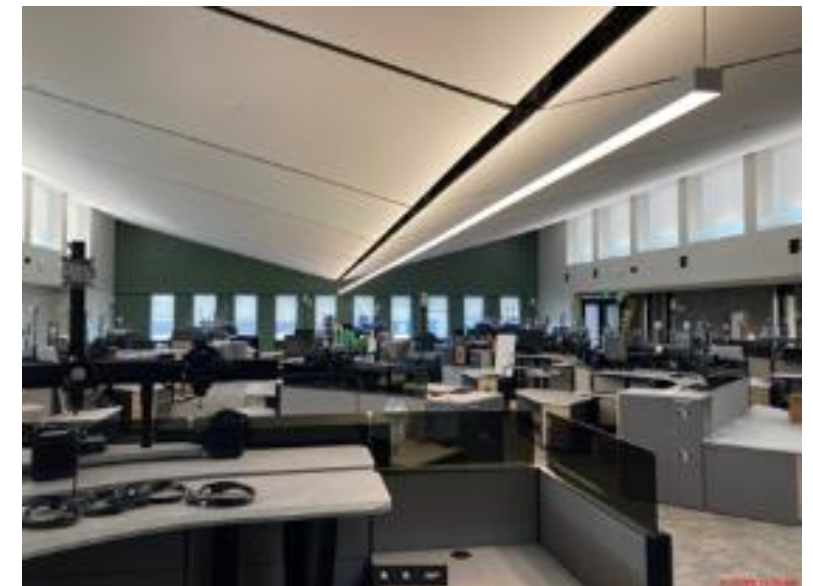
The ROC Built To:

- **House three independent, but co-located and mutually cooperative agencies:**
 - Consolidated PSAP (9-1-1/Dispatch)
 - Lake County Emergency Management Agency
 - Emergency Telephone System Board (ETSB/ (J)ETSB)
- **Consolidate services to better serve Lake County residents and visitors:**
 - Reduce/eliminate call transfers for participating agencies
 - Streamline interagency response and mutual aid
 - Increase data sharing between agencies and responding personnel

ROC Facility Details:

- **\$53.8 million cost estimate for entire project**
- **Space for 34 Telecommunicator positions**
- **Hardened Facility – withstand severe weather**
- **Two 75' radio towers for communications support**
- **Wellness spaces and ergonomic workstations for employee well-being**
- **Net Zero Energy Building, featuring**
 - Solar power
 - Geothermal heating and cooling system
 - Low flow water
 - Load shedding outlets that disengage certain circuits overnight
 - Real-time energy usage tracking around the building
 - Sustainable building materials, such as recycled or locally sourced materials

May 9, 2025



Adaptive Infrastructure: **Strategy 2**

Develop and implement multi-modal transportation solutions for the efficient and safe movement of people, goods, services that supports the local economy and promotes the reduction of single-occupied vehicle travel.

Performance Measures:

- Reduce the number of fatal and serious injuries for all the users of the county highway network of roads, bike paths, and sidewalks.
- Reduce roadway congestion to promote safe and efficient travel.
- Increase non-motorized accommodations with new bike path, sidewalk, and crosswalk installations along the county highway network.
- Increase transit and paratransit ridership through improved means and access.
- Increase intersection safety with new roundabout intersection installations.



Strategy 2: Roundabouts, Non-motorized, Paratransit, and Crash Data



Roundabouts Maintained by Lake County

	2021	2022	2023	2024
Number in Operation	8	8	9	9
Funded in 5-Year Plan	2	7	7	7

Rides Provided by Ride Lake County



19,792	39,602	41,894
2022	2023	2024



Non-motorized Path on County Transportation System

	2021	2022	2023	2024
Miles of Path, Bike Lane, and Bike-Friendly Shoulder	199	207	227	266
Percentage of County Highway Centerline Miles with Sidewalk or Path	N/A	35%	36%	36.5%



Fatal and Serious Injuries on County Transportation Network

	2021	2022	2023
Fatalities (5yr rolling average)	15.8	16.2	15.2
Fatality Rate per 100 Million Vehicle Miles Traveled	0.50	0.64	0.61
Serious Injury (5yr rolling average)	132.8	130.6	125.8
Serious Injury Rate per 100 Million Vehicle Miles Traveled	4.71	5.21	4.07
Non-motorized Fatalities and Serious Injuries	33	39	39

Strategy 2:

Safety Projects

- **Rumble Strips**
 - Reduce run-off-road and head-on crashes
 - Installed along two-lane county highways with posted speed limits of 40 mph and over
- **Accessible Pedestrian Signals**
 - Audible communication of WALK and DON'T WALK intervals
 - Installed at signalized crosswalk locations
- **Safety Action Plan**
 - Developing countywide safety plan to identify high injury areas and mitigation strategies
 - A County Vision Zero Policy will be the next step

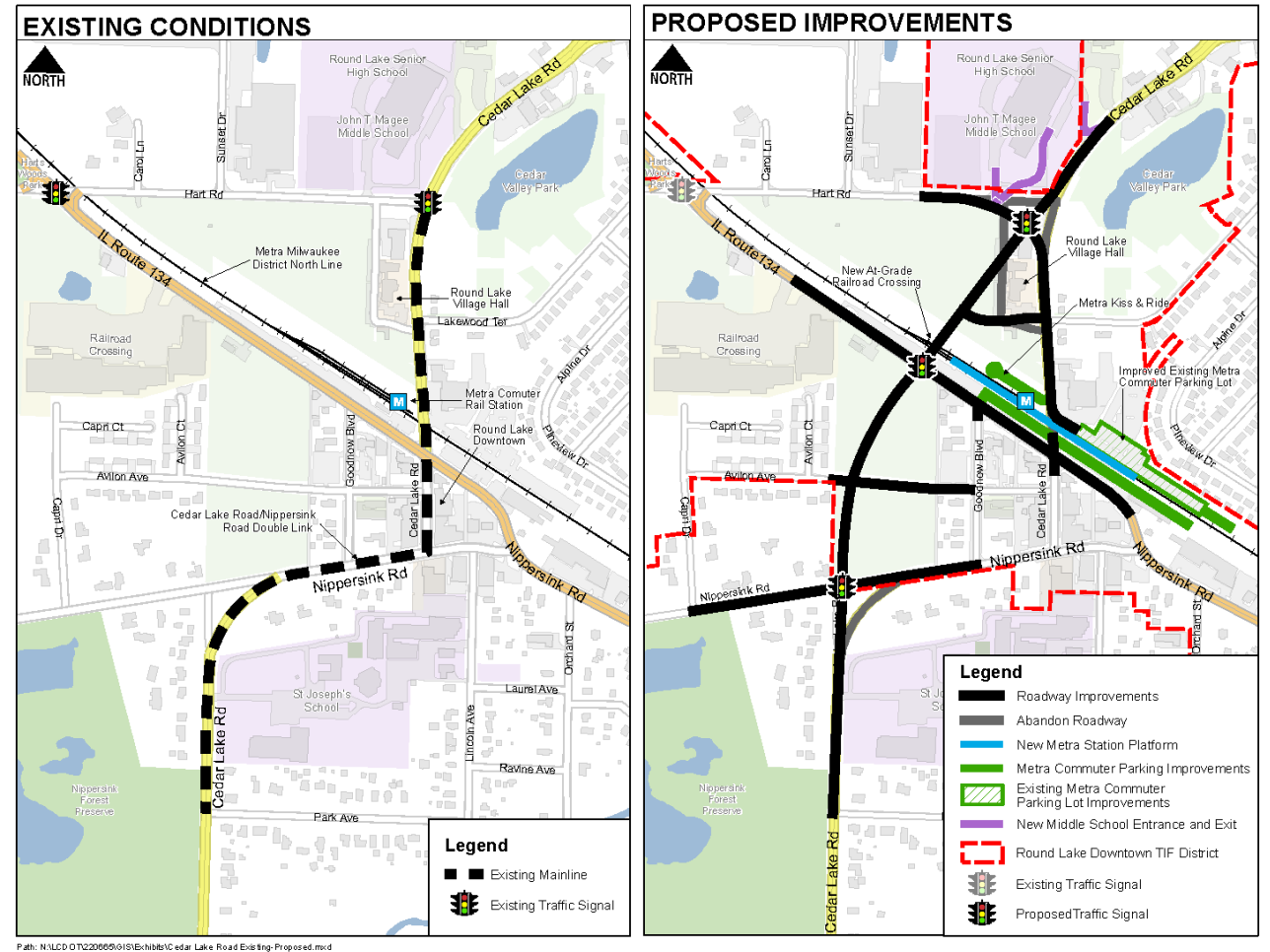


STAR
Safe Travel for All Roadmap

Strategy 2:

Cedar Lake Road Realignment

- Improves mobility, safety, transit, and non-motorized transportation
- Realigns roadway and replaces stop sign with traffic signal
- Expands sidewalk and bike path connections to downtown business district and fills gap on Millennium Trail
- Round Lake Metra Station modernization includes new boarding platforms, warming shelters, parking lot and bus parking
- Estimated Cost: \$52 million



Strategy 2:

Roundabouts

Potential New Locations

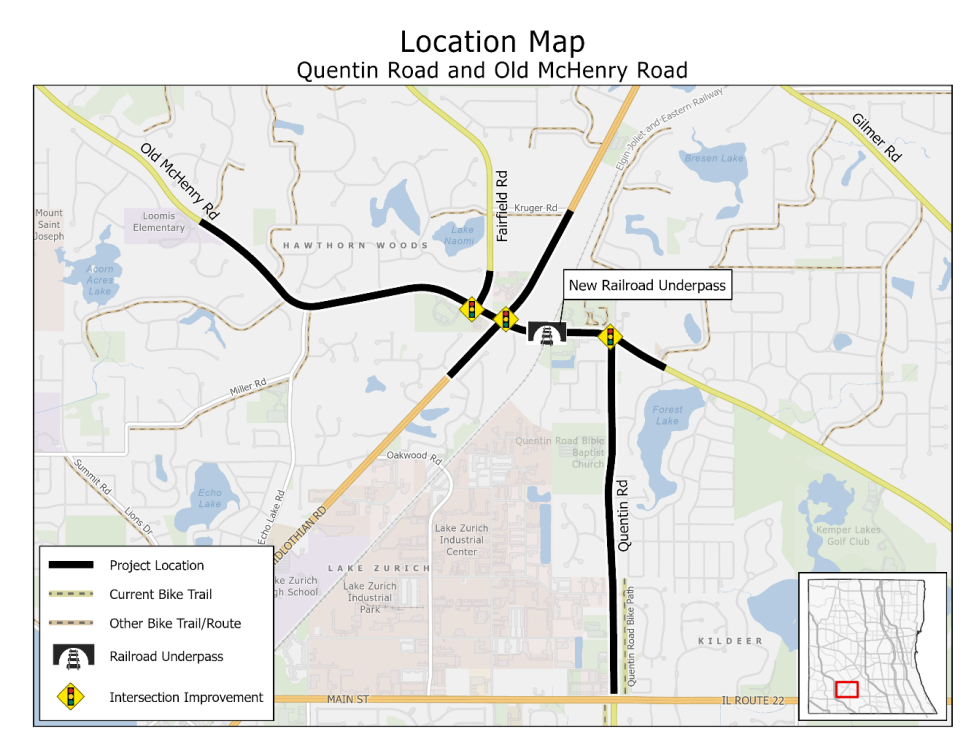
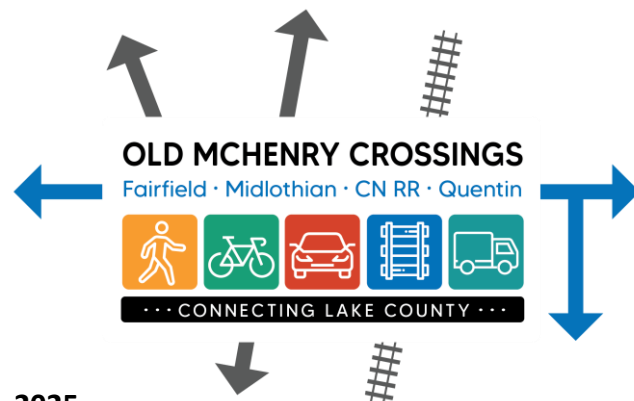
1. Center Street at Atkinson Road*
2. Darrell Road at Dowell Road
3. Darrell Road at Fisher Road
4. Darrell Road at Roberts Road*
5. Deep Lake at Depot Street
6. Deep Lake Road at North Avenue
7. Hunt Club Road at Stearns School Road
8. Kenosha Road at 21st Street
9. River Road at Roberts Road**
10. Rollins Road at Wilson Road*
11. Russell Road at Kenosha Road
12. Russell Road at Lewis Avenue

**Under evaluation **Modification of existing RAB*



Strategy 2: Old McHenry Crossings

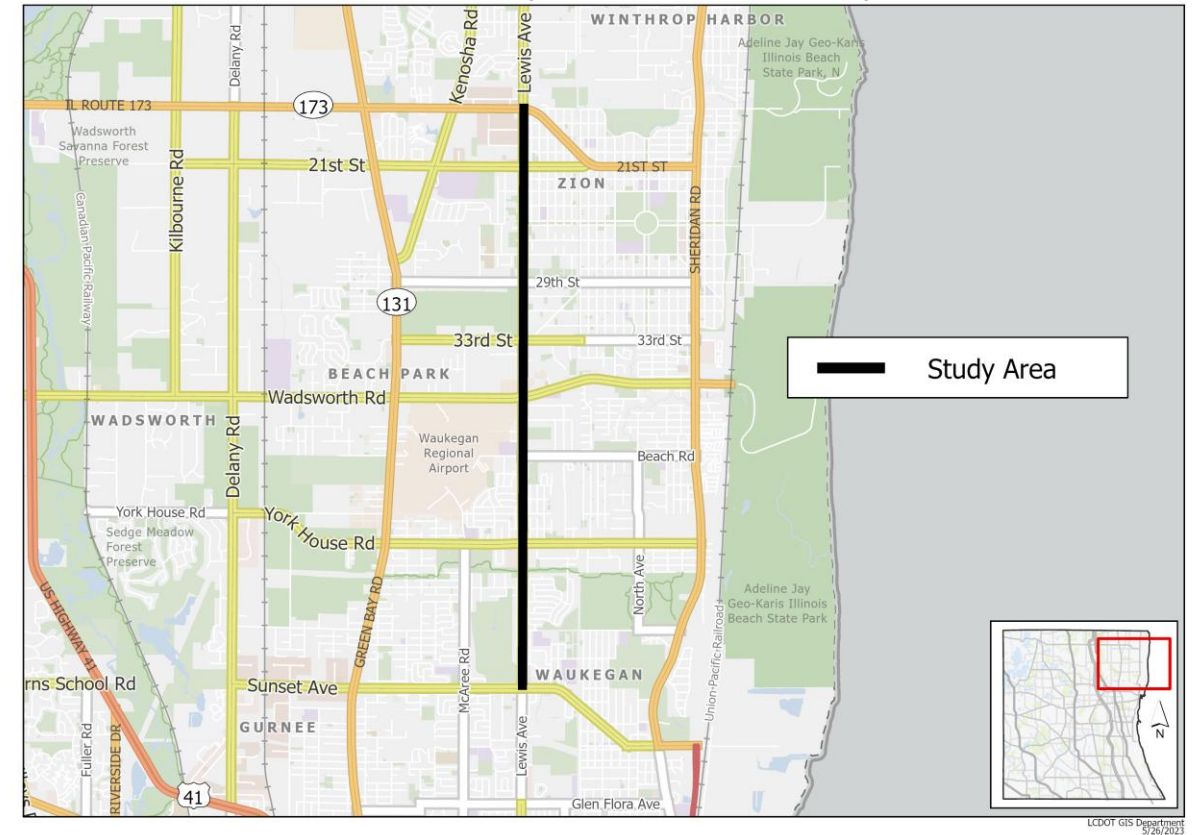
- Around 30,000 vehicles use corridor daily
- Over 20 daily freight trains increase congestion for motorists, school buses, and emergency responders
- Ongoing engineering study evaluates roadway, intersection and non-motorized improvements, including a railroad grade separation
- Estimated Cost: \$148M



Lewis Ave: Sunset Ave to IL 173

- Initial engineering study to investigate crashes and potential range of alternatives
- 5-mile corridor with over 20,000 vehicles per day
- 1029 crashes (353 injury crashes) over 5-year study period
- Plan to submit future Safe Streets for All implementation grant (federal funds)

Location Map
Lewis Avenue (Sunset Avenue to IL-173)



Implement new and emerging technologies and applications that support responsible development and enhance the capability, resiliency, and safety of infrastructure systems.

Performance Measures:

- **Expand Lake County PASSAGE to more corridors and intersections for the future of connected vehicles.**
- Number of residents transitioned from well water systems and septic fields to Lake Michigan water and sanitary sewer networks.
- Consolidate, secure, and reduce the number of duplicative software and applications.
- Measure the value of the existing systems



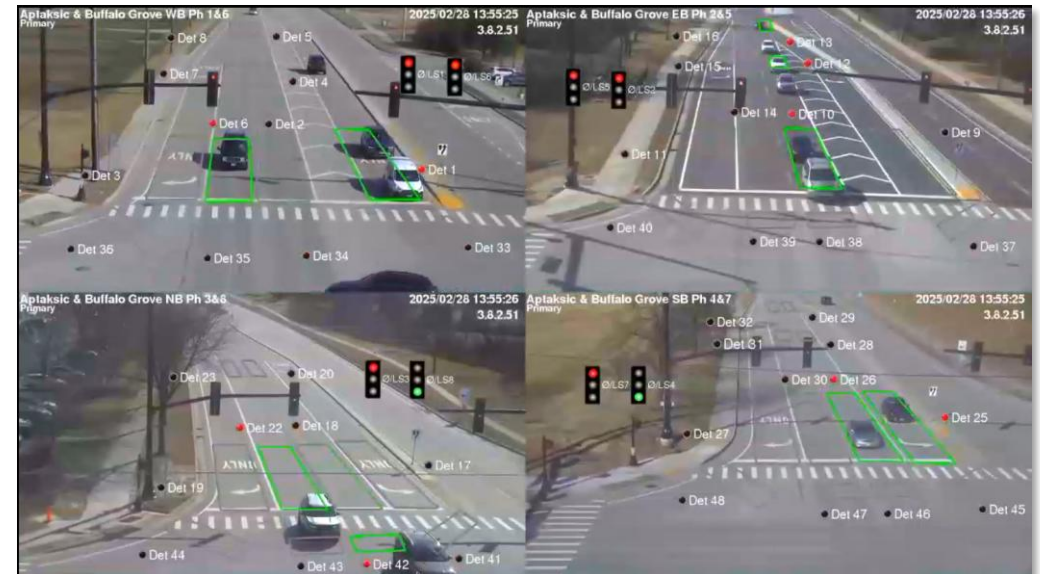
Strategy 3: **Lake County *PASSAGE***

- 100% of county signals are connected to *PASSAGE*
- 89% of all signals in Lake County are connected to *PASSAGE*



Percentage of State, County and Municipal Signals Connected

2021	2022	2023	2024
87%	88%	89%	89%



Advance regional infrastructure solutions and services in partnership with and through the support of federal, state, and local agencies

Performance Measures:

- **Identify solutions to mitigate regional congestion in Lake County (example: Update Lake County's Long-Range Transportation Plan).**
- Reduction of sediments, pollutants, and nutrients into waterways (e.g. Nutrient Assessment Reduction Plan).
- Percentage of Lake County residents with access to high-speed broadband via connectivity, affordability, and adoption.
- Reduction in percentage/number of flood prone structures.
- **Update Lake County's State Highway Consensus Plan in 2024 to ensure continued agreement amongst participating partners post-pandemic.**



Regional Planning and Partnerships



**Lake County Board
Strategic Plan**

**Lake County Safety
Action Plan**

**Ride Lake County
Paratransit**

**IDOT Long Range
Transportation Plan**

**IDOT MYP and State
Highway Consensus
Plan**

**RTA, Metra, and
Pace Strategic Plans**

CMAQ ON TO 2050

**CMAQ
Northeastern IL
Priority Grade
Crossings**

**CMAQ Regional
Greenways and Trails
Plan**



Advance regional infrastructure solutions and services in partnership with and through the support of federal, state, and local agencies

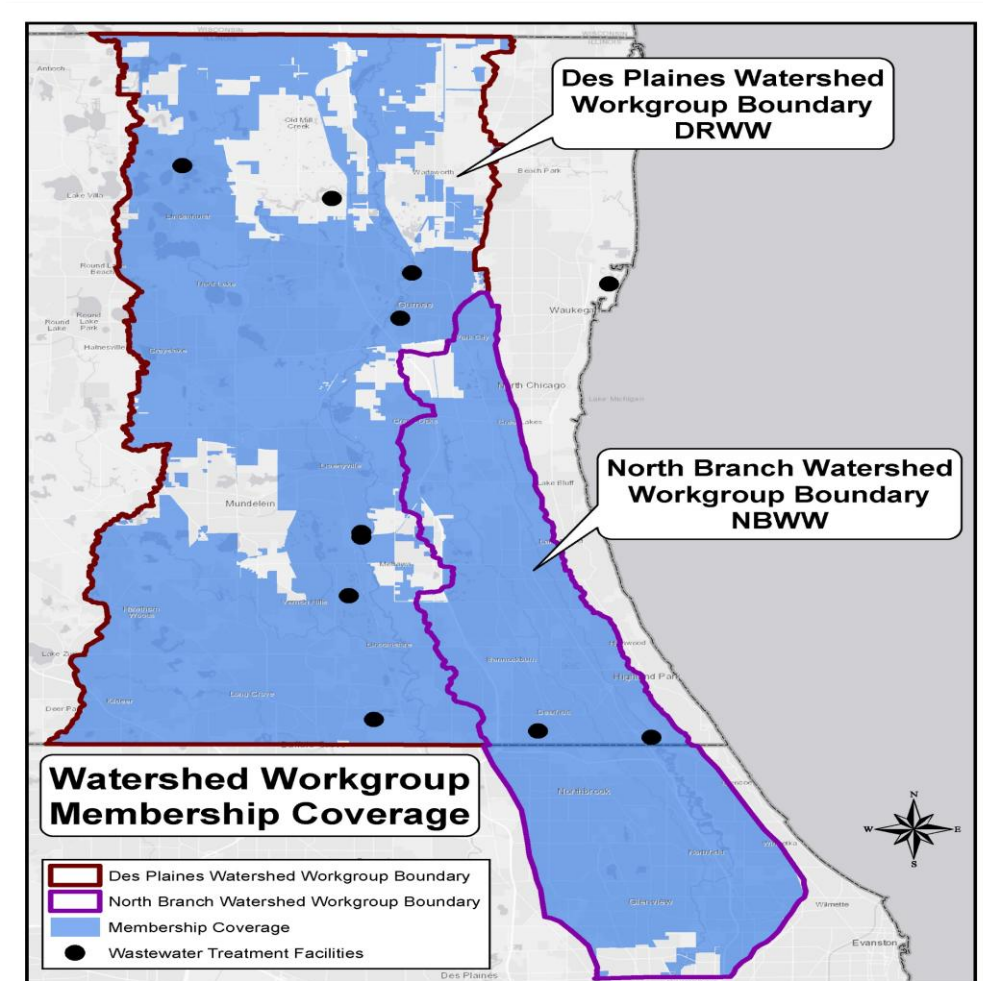
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- **Reduction in percentage/number of flood prone structures.**
- Update Lake County's State Highway Consensus Plan in 2024 to ensure continued agreement amongst participating partners post-pandemic.

Watershed Workgroup Partnerships



- Why form a Workgroup?
- Who is Involved?
 1. Des Plaines River Watershed Workgroup
 - 200 square miles
 - Lake County
 2. North Branch Chicago River Watershed Workgroup
 - 94 square miles
 - Lake & Cook County



Strategy 4:

Workgroup Partnerships



DES PLAINES RIVER
WATERSHED
WORKGROUP



STORMWATER MANAGEMENT COMMISSION

- **Interjurisdictional Coordination (39 Members)**

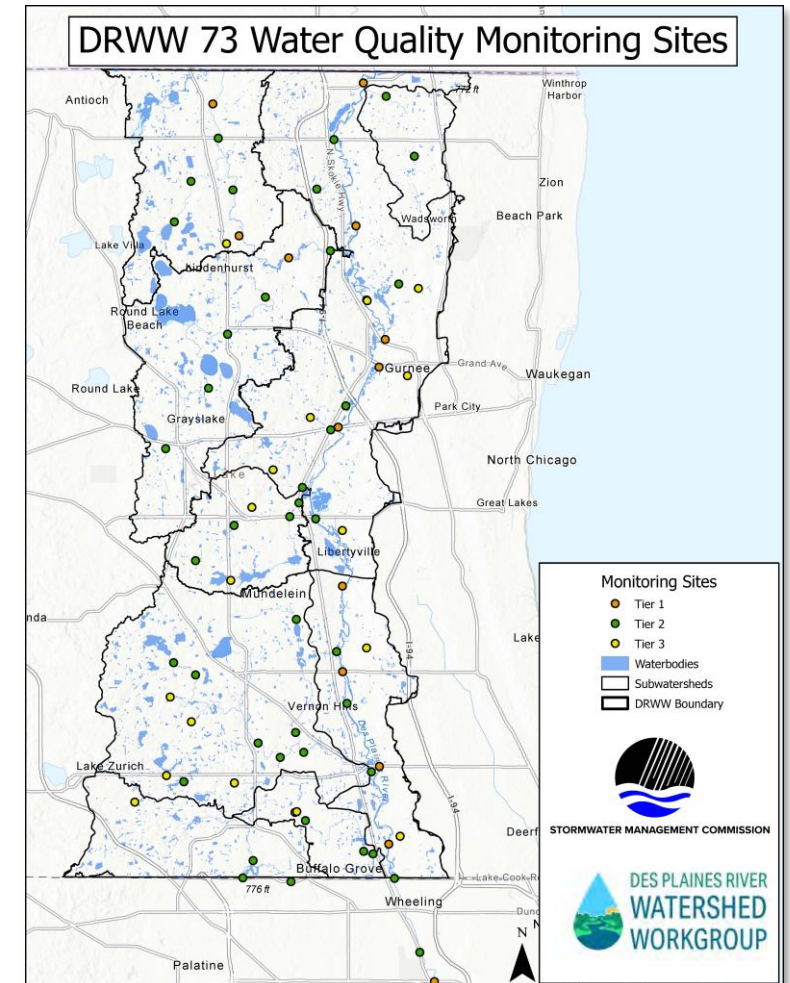
- 22 Municipalities
- 4 Townships
- 7 POTWs
- Lake County – Multiple Depts.
- IDOT
- LCFPD
- 7 Consultants
- 1 Park District
- 1 Not-for-Profit

- **DRWW ongoing watershed monitoring efforts**

- Starting in 2016 with 44 locations, DRWW annually collects multiple water column chemistry in-stream samples, and since 2020 has been performing water quality monitoring at 73 sites
- 2016, 2018, 2020, and 2022 performed bioassessment & sediment sampling at 17 sites. 2020-2022 performed continuous flow monitoring (datasondes) at 3 sites

- **From 2020 to 2023, the DRWW developed the Nutrient Assessment Reduction Plan (NARP) to submit to the Illinois EPA (submitted 12/2023)**

- Purpose: identify phosphorus input reductions and other measures needed to address the phosphorus-related impairments (dissolved oxygen [DO] and nuisance algae)



Strategy 4: Workgroup Partnerships

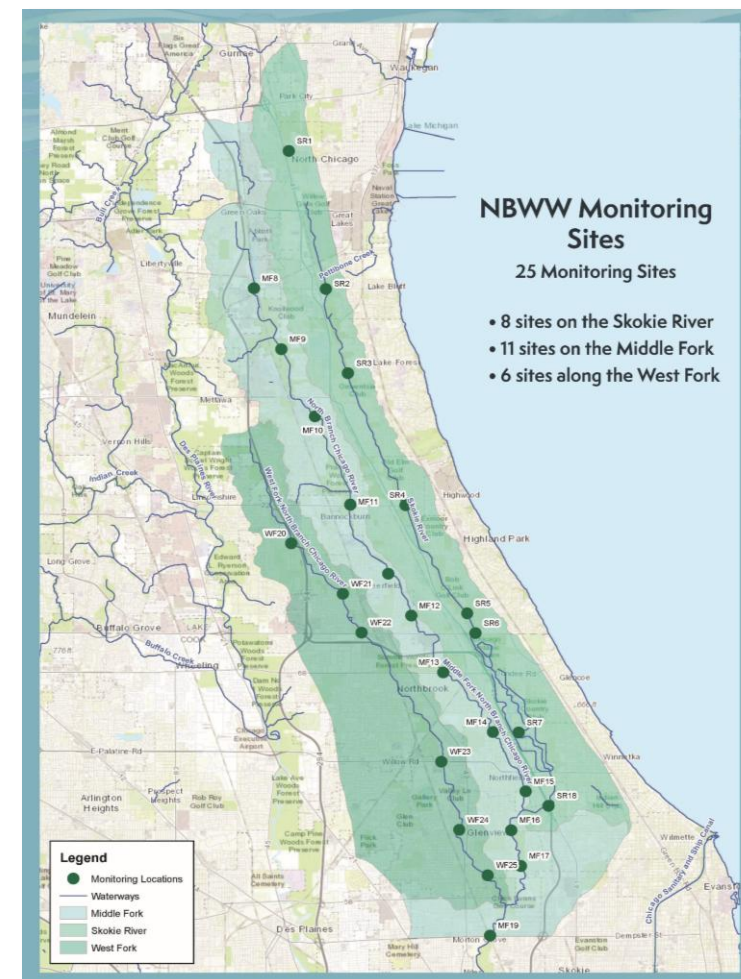


NORTH BRANCH
CHICAGO RIVER
WATERSHED
WORKGROUP



STORMWATER MANAGEMENT COMMISSION

- **Interjurisdictional Coordination (45 Members)**
 - 21 Municipalities
 - 2 Townships
 - 2 POTWs
 - 2 Counties – Multiple Depts.
 - 3 Transportation Agencies
 - 3 Drainage Districts
 - 2 Forest Preserve Districts
 - 1 Park District
 - 6 Consultants
 - 3 Not-for-Profits
 - 1 Open Lands Association
- **NBWW ongoing watershed monitoring efforts**
 - Since 2018, annually collects water column chemistry in-stream samples from 25 monitoring sites
 - 2018 - 2019 & 2020 - 2021 (2nd Round)
Performed bioassessment & sediment sampling at all 25 sites and continuous flow monitoring (datasondes) at 14 sites
- **2018 – Since 2021, NBWW has been developing a Nutrient Assessment Reduction Plan (NARP) to submit to the Illinois EPA (submitting Dec. 2025)**
 - Purpose: identify phosphorus input reductions and other measures needed to help ensure that dissolved oxygen (DO) and offensive aquatic algae and aquatic plant criteria are met throughout the watershed.



Federal and State collaboration



Key Funding Secured:

- **\$33.6M FEMA Funding**
 - Targeted for flood-prone structure, buyouts, and infrastructure improvements, and mitigation projects
 - Reinforces resilience in high-risk zones
- **\$6.7M IDNR-OWR Funding**
 - 13 Homes removed through acquisition projects
 - Reduces long-term flood risk in vulnerable areas

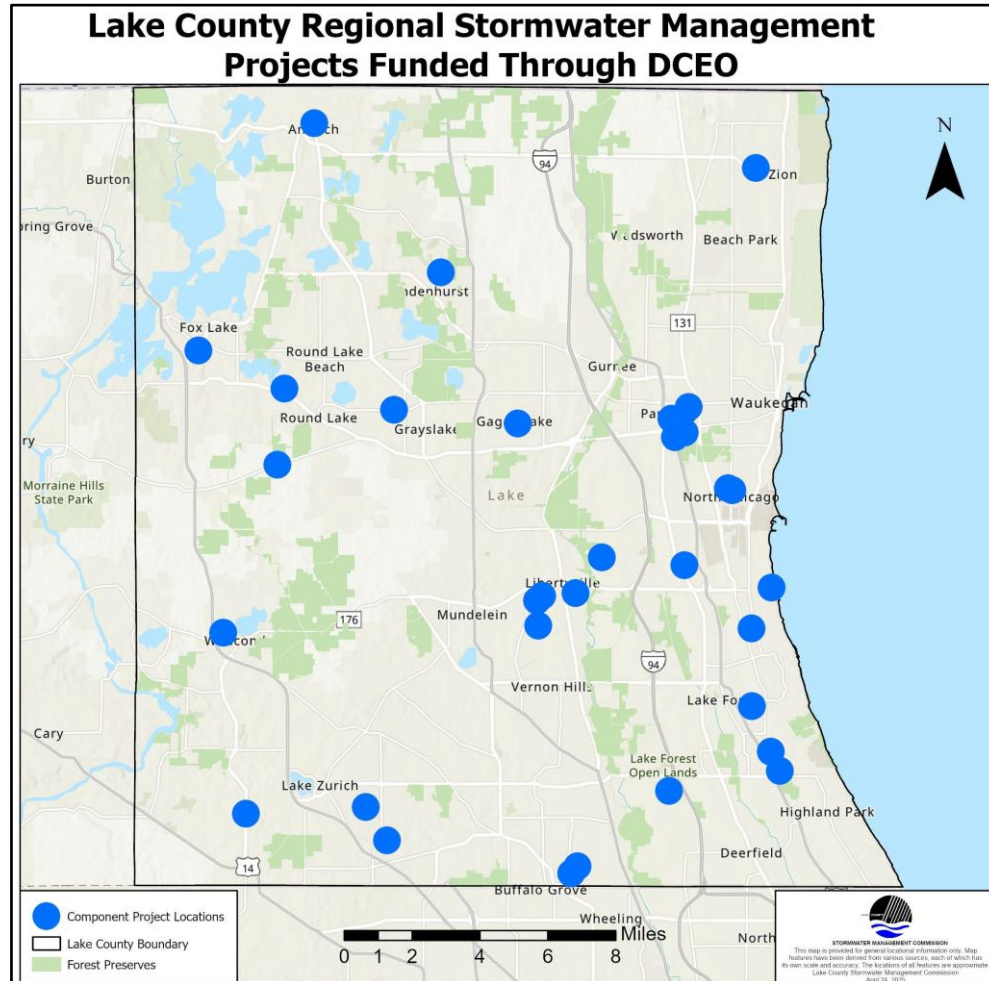
Impact on Performance Goals:

- 96 Flood-Prone Structure Assessment
- Illinois State Water Survey project for risk assessment
- Supporting future mitigation grants
- Strengthened collaboration with federal and state agencies
- Enhanced regional flood resilience
- Improved infrastructure reliability

Strategy 4: State of Illinois Department of Commerce and Economic Opportunity - Funded Projects with Local Sponsors



STORMWATER MANAGEMENT COMMISSION



DCEO Round 1

- **\$30** million grant
- **13** county-wide projects with local sponsors
- Completed in **2024**
- Benefiting over **2,300** properties and **25** roads

DCEO Round PC

- **\$2.6** million grant
- **3** projects with Park City
- Completion **9/2023 - 8/2026**
- Expected to benefit over **378** properties and **3** roads

DCEO Round 2

- **\$30** million grant
- **16** county-wide projects with local sponsors
- Completion **11/2024 - 10/2026**
- Expected to benefit over **2,000** properties and **100** roads

Strategy 4:

DCEO Grants in Action



STORMWATER MANAGEMENT COMMISSION

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www.lakecountyil.gov/smc



SMC grants in action, our future is bright

Advance regional infrastructure solutions and services in partnership with and through the support of federal, state, and local agencies

Performance Measures:

- Identify solutions to mitigate regional congestion in Lake County (example: Update Lake County's Long-Range Transportation Plan).
- Reduction of sediments, pollutants, and nutrients into waterways (e.g. Nutrient Assessment Reduction Plan).
- **Percentage of Lake County residents with access to high-speed broadband via connectivity, affordability, and adoption.**
- Reduction in percentage/number of flood prone structures.
- Update Lake County's State Highway Consensus Plan in 2024 to ensure continued agreement amongst participating partners post-pandemic.

Adaptive Infrastructure: **Strategy 4**

2019

Households with Broadband of any type: 91.7%

Households with Broadband such as cable, fiber optic or DSL - 202,395 OR 81.7%

Households without an Internet subscription - 20,286 OR 8.2%

2023

Households with Broadband of any type – 246,876 OR 94.9%

Households with Broadband such as cable, fiber optic or DSL - 213,826 OR 82.2%

Households without an Internet subscription - 13,293 OR 5.1%

Source: US Census American Community Survey – S2801 Types of Computers and Internet Subscriptions for Lake County, IL

Implement new and emerging technologies and applications that support responsible development and enhance the capability, resiliency, and safety of infrastructure systems.

Performance Measures:

- Number of residents transitioned from well water systems and septic fields to Lake Michigan water and sanitary sewer networks



Pekara Water System

- 1227 service connections
- Improved water quality supplied
- Lake Michigan Water secured from the Village of Buffalo Grove (NWWC – Evanston)
- Project supported by ARPA Funds
- Primary construction tasks completed





Questions