



TRANSPORTATION

Transportation is any means of getting from one place to another, whether by walking and biking or taking personal or public motorized vehicles. Mobility is a fundamental human need connecting people to one another and to the goods, services, and livelihoods they need in order to survive and thrive. A healthy and robust transportation system provides opportunities for these multiple transportation options in a safe and reliable manner. Community members would like to see bike/walking trails to schools/work/goods, not just for recreation. This would lead to safety for all – pedestrians, bikes, and cars.

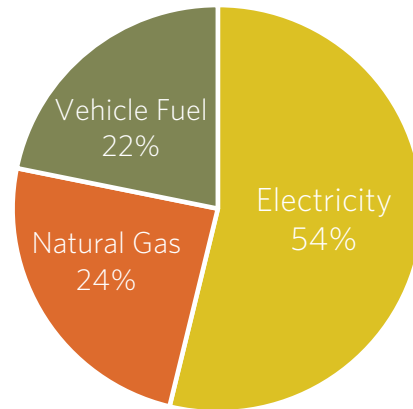
Many locations in Bemidji are walkable, with grocery stores and parks generally within a mile of housing. What this doesn't account for, however, is Beltrami area residents who live outside of the town center and have limited access to reliable transportation, which can negatively impact access to not only amenities and recreation but employment and critical services. An equitable and resilient community depends on reliable transportation for all in multiple modes.

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COMMUNITY TRANSPORTATION CONDITIONS

Energy used in the transportation sector represents a significant portion of Bemidji's total emissions, with vehicle fuels contributing 22% of total greenhouse gas emissions in 2016. Reducing vehicle miles travelled, particularly single occupancy, and shifting to more efficient motorized vehicles are two ways to reduce emissions. Supporting the former can take many forms including the improvement of access to alternative modes of transportation or incentivizing walking or biking. Further expanding electric vehicle charging infrastructure and encouraging fuel-efficient vehicle choice and operation can support the latter.

GREEN HOUSE GAS BREAKDOWN BY ENERGY TYPE (TONS OF CO2)



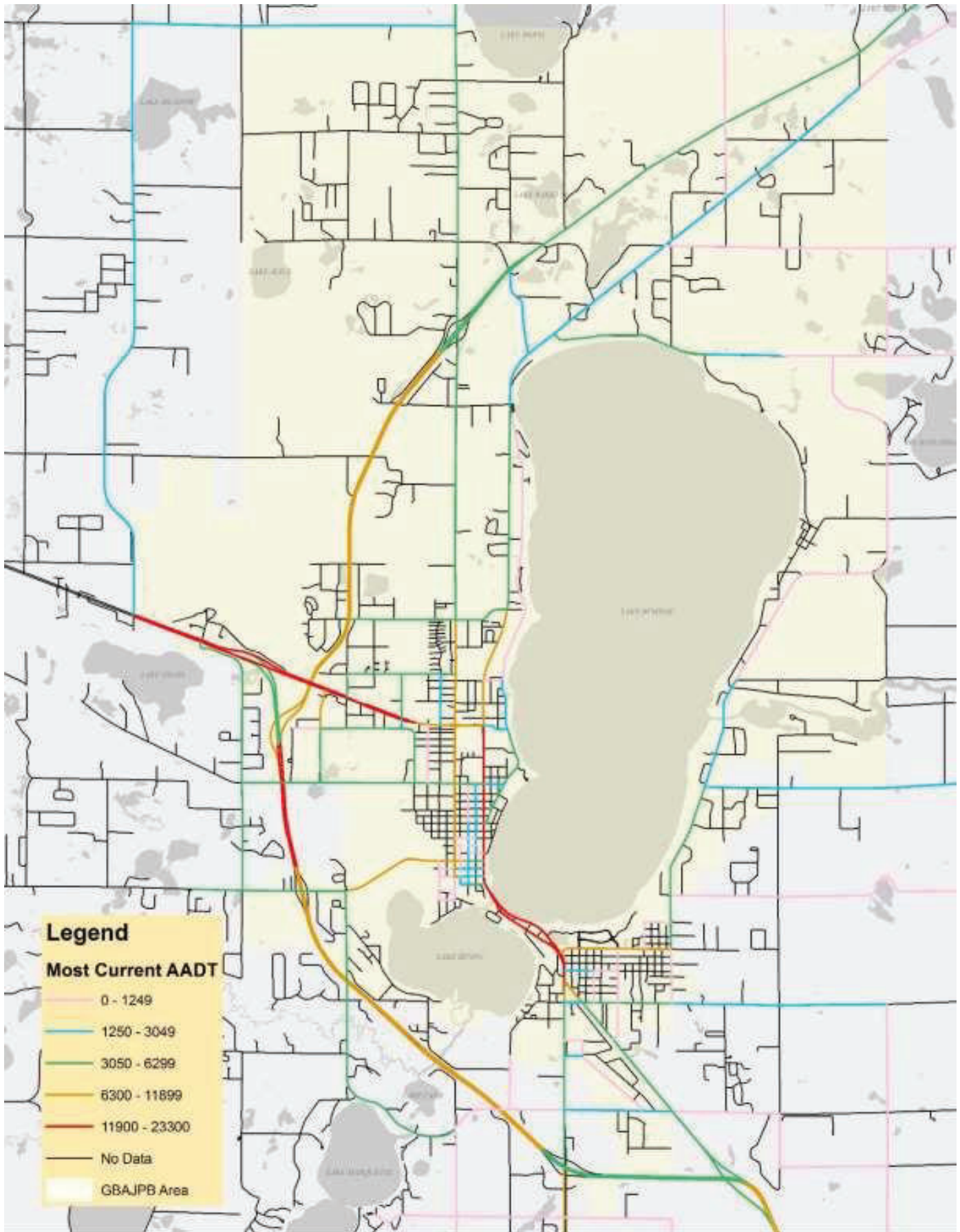
Data Source: Ottertail Power (2017) and extrapolated MERC natural gas sales to Beltrami County

“At the end of the day, the transportation system needs to be safe and reliable for everyone.”

“With unreliable transportation comes increased friction of distance.”

“It seems that some voices are stronger than others when it comes time to make decisions related to transportation. How do we fix that?”

GREATER BEMIDJI AREA TRAFFIC VOLUMES



Source: GBAJPB, 2012-2017

The breakdown of light duty vehicles by fuel type, shown at right, comes from a 2018 report of the Great Plains Institute titled 'Existing Energy Conditions: City of Bemidji,' generated with data from Minnesota's Local Government Project for Energy Planning (LoGoPEP) and funded by the McKnight Foundation and Department of Energy. The report assesses the breakdown of light duty vehicles by fuel type, stating:

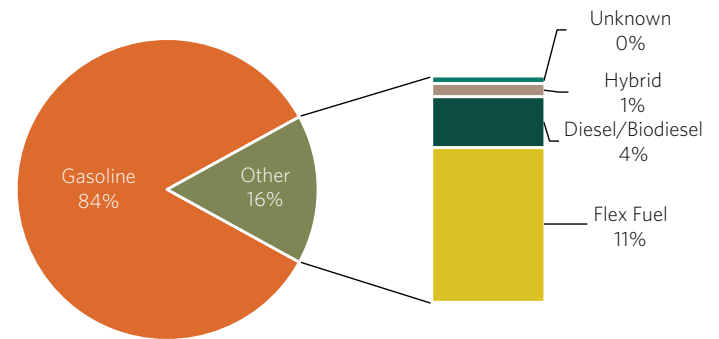
The U.S. Department of Energy reports that there are 29,000 light duty vehicles in the Bemidji market with an average fuel economy 21.5 miles per gallon, on par with the national average of 21.64 (Alternative Fuels Data Center). For primary fuel source, 84% of these vehicles use gasoline; flex fuel (e85) makes up the next highest fuel source.

The report also explores annual trends in vehicle miles travelled, a transportation indicator that is updated and assessed using data from MNDOT annual reports on the following page.

VEHICLE MILES TRAVELED

One of the reasons people often share for appreciating life in Bemidji is the relative lack of traffic compared with busier urban environments like the Twin Cities Metro. However, with population growth and a lack of reliable public transportation, this benefit may be jeopardized in the future. Considering how Bemidji may look and feel with more traffic is worthy of exploration.

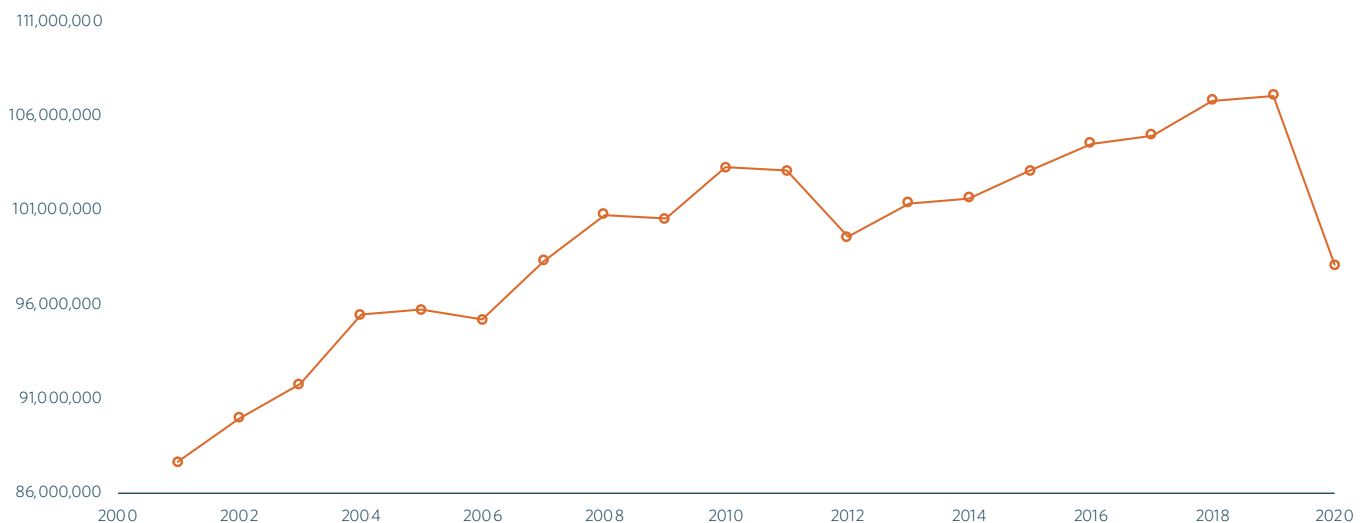
LIGHT DUTY VEHICLES BY FUEL TYPE



Data Source: U.S. Department of Energy State and Local Energy Data.

“Transportation availability and consistency are lacking. Limited to couple Uber/Lift and a challenging bus process. Bicycling infrastructure is good, but still lacking.”

VEHICLE MILES TRAVELED IN BEMIDJI 2001- 2020



Data Source: MNDOT Annual Reports (2001-2020)

ELECTRIC VEHICLE CHARGING OPTIONS (2022)

Name	Year	Location	Level	Number of Chargers	Payment	Free Parking?	Hours Open
Beltrami Electric Cooperative	2018	411 Technology Dr NW, Bemidji, MN 56601.	Level 2 and DC Fast Charge	4 plugs available	DCFC: \$2.50 + 0.35 per kwh. Level 2: \$1.00 + 0.25 per kwh.	Yes	24hrs
Bemidji Supercharger	2021	2000 Paul Bunyan Dr NW, Bemidji MN, 56601	Tesla Supercharger only - 250 kW.	8 plugs available	Yes Payment - Actual Amount Unknown	Yes	24hrs
Bemidji State University	2016	1500 Birchmont Dr NE, Bemidji, MN 56601.	32A@240V or 8kW	1 plug available	No payment required	No - BSU Lot, Permit Required	24 hrs
Bemidji City Hall	2016	317 4th St NW, Bemidji, MN 56601	Level 2	1 plug available	No payment required	Yes	24 hrs
Bemidji City Hall	2020	317 4th St NW, Bemidji, MN 56601	Level 2 and DC Fast Charge	3 plugs available	Payment Required \$0.30/min for DCFC, Free Level 2	Yes	24 hrs
Paul Bunyan and Babe the Blue Ox	2016	300 Bemidji Ave N, Bemidji Mn 56601	32A@240V or 8kW	1 plug available	No payment required	Yes	24hrs

HIGHWAY 197

The Minnesota Department of Transportation recently studied the stretch of State Highway 197 extending from Gillett Drive, near the Bemidji Regional Airport, to Bemidji Ave. The study sought to identify how the community may improve safety along the corridor, which sees a 30%-40% higher crash rate than similar corridors in the state. Additionally, efforts to improve aging infrastructure aim to achieve more equitable access to multi-modal transportation along the route. Achieving this outcome will require improvements to existing pedestrian infrastructure, which currently lacks consistent sidewalk access, boulevards to separate vehicular and pedestrian traffic, and sufficient lighting for travel after dark. Inclusion of bicycle infrastructure will also be a critical strategy toward increasing equitable access to businesses and services along corridor and support physical activity.

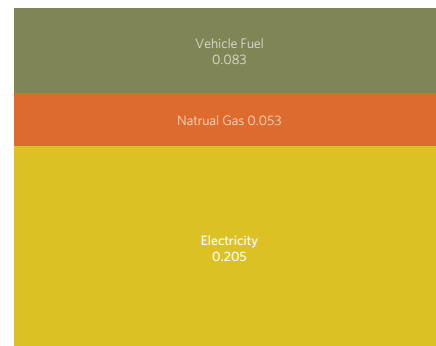
Initial feedback centered concern for roundabouts suggested for six intersections. Concerns voiced about roundabouts included restricting access to businesses, the impact to adjacent properties of their larger footprint, and negative driver perceptions. After adjustments to the proposal and additional engagement with a Community Review Panel, the plan still includes roundabouts at strategic locations. Roundabouts have been shown to increase the safety and traffic flow through intersections formerly featuring stop signs or signals. According to MNDOT, replacing signal intersections with roundabouts helps to reduce vehicle emissions and fuel consumption associated with idling. Public education will be necessary to inform stakeholders of the potential benefits of replacing intersections with roundabouts as the project continues.

ALTERNATE TRANSPORTATION INFRASTRUCTURE

Transportation opportunities in Bemidji are limited. Community members repeatedly expressed a desire for safer non-motorized movement and reliable public transit options. Paul Bunyan Transit provides public bussing within a 10-mile radius of City Hall through its "Dial-A-Ride" program for reasonable rates. Yet, to some, the call-for-service model and limited operating hours is neither conducive nor convenient. Bus services are also available on a ticketed or contracted basis for solo or group travel to destinations beyond city limits. For instance, Bemidji Bus Lines provides options for church group or athletic team travel and both Jefferson and Greyhound Lines provides service to the Twin Cities metro. Ridesharing platforms such as Uber and Lyft are operating in Bemidji. Their availability remains limited, however, suggesting traditional taxi services (ie. First City Taxi LLC, Bemidji Cab) remain the primary option for low-occupancy, short distance shuttle services.

"As far as, you know, my perspective, is when I think of growth, I think it'd be nice if at all possible in-fill within your city, not keep expanding the sprawl... if we're gonna grow, lets grow within our existing boundaries."

CO2 INTENSITY OF FUEL TYPE (CO2/MMBTU)



Data Source: Ottertail Power (2017) and extrapolated MERC natural gas sales to Beltrami County

BIKE AND WALKING INFRASTRUCTURE

Bikeway connects local trails to a network of routes through seven districts, following the Mississippi from its headwaters through the Twin Cities metro and beyond. Though identified as a bikeway, the trail serves all forms of non-motorized transportation and recreation, including rollerblading, walking, and more. The Mississippi Northwoods MRT section travels west to east along the southern border of Lake Bemidji on its way to Cass Lake before splitting into two distinct routes. Continuing east connects riders to the Mississippi Crossings MRT section and travels through Grand Rapids. Traveling south from Cass Lake connects with the Paul Bunyan and Heartland Trail MRT sections that travel through Walker. The Mississippi Crossings and Paul Bunyan/Heartland Trail sections converge in Brainerd before continuing south. Though much of the MRT utilizes roadways, many sections take advantage of trails dedicated to non-motorized traffic.

The Paul Bunyan State Trail, a section of the Northwoods MRT section, provides a direct route from downtown Bemidji to Lake Bemidji State Park for non-motorized traffic along the eastern shores of Lake Bemidji. The trail does not provide a protected route around the full circumference of Lake Bemidji. The existing 17-mile route utilizes County Road 20, Bemidji Avenue, and Birchmont Drive along the northwest third of the lake. Dedicated bike lanes supplement bicycling infrastructure through portions of the City of Bemidji and have helped the City of Bemidji achieve recognition as a bronze level Bicycle Friendly Community (BFC). First conferred upon the City by the League of American Bicyclists back in 2012, the designation acknowledges efforts to make bicycling a transportation and recreation option for all people. Bemidji is one of 33 communities across Minnesota to have received recognition from the League, which issued the City its most recent report card in Fall 2016. In it, the League identifies strategies for improving bicycling infrastructure toward the achievement of recognition as a silver level BFC.

The League identifies five core areas for support of bicycle infrastructure – engineering, education, encouragement, evaluation & planning, and equity, diversity, & inclusion. The city must address each area to maintain its bronze status or improve to silver status within the BFC program. Engineering safe and welcoming infrastructure for bicyclists will likely have positive spillover effects for other non-motorized forms of transportation and recreation. Doing so can support other, parallel initiatives like Safe Routes to Schools.

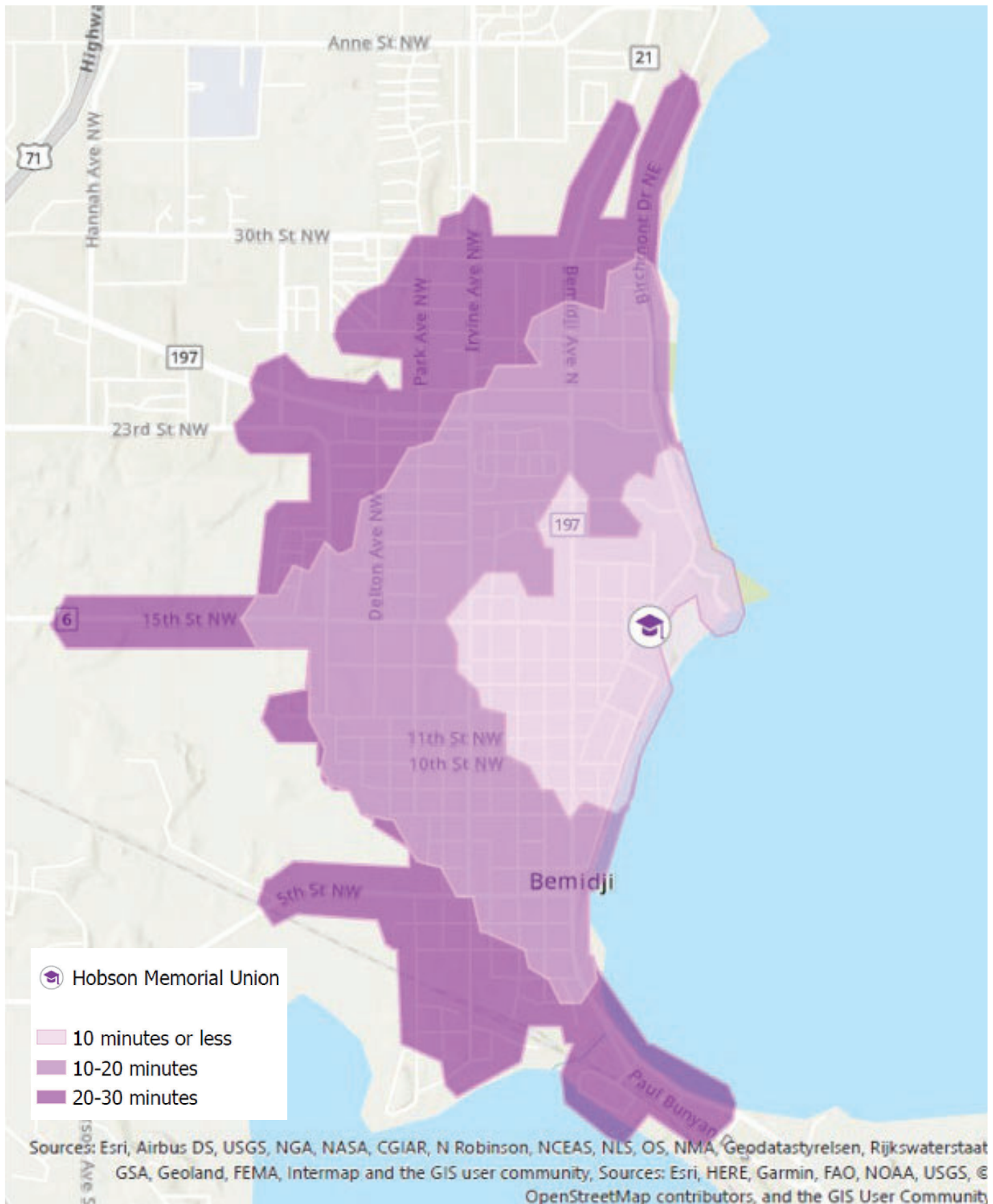
“When it comes to transportation resilience, I start thinking about bicycles and pedestrians, and non-motorized transportation and that as a community, the community can still be resilient if gas prices go up, they can still access grocery stores, necessary services, transits available, something like that and providing those community services.”

SAFE ROUTES TO SCHOOLS

Coordinated by the Minnesota Department of Transportation, the Safe Routes to School (SRTS) program strives to improve safety, reduce traffic, and improve air quality near schools through a multidisciplinary approach like that of the League’s BFC program. In addition to the five “E’s” promoted by the League (engineering, education, encouragement, evaluation, equity), SRTS focuses also on engaging children, families, school staff, and community partners in the work of building the infrastructure and opportunities necessary to achieve its state goals. Input of community members confirms the existing lack of connectivity between much of the Bemidji community and its schools.

Community members and ISD #31 administrators similarly identify public school transportation via busing as a challenge. The state mandates school districts provide busing for pupils. The transportation formula as of 2022 provides financial support to districts on a per pupil basis, based on student enrollment. For the Bemidji Area School District, spread across a broad geographic range, this model results in an annual deficit of \$800,000 to the transportation budget. This deficit leads the district to decrease the rate at which it renews its bus fleet, resulting in an aging fleet which requires additional maintenance dollars to ensure the safe transportation of area youth.

WALK TIME TO HOBSON MEMORIAL UNION



CAMPUS TRANSPORTATION CONDITIONS

The most recent Master Facilities Plan for Bemidji State University, published in 2014, identifies on-campus circulation as disjointed and parking as a constraint to future development. The latter has been partially addressed through removal of a residential hall and addition of supplemental parking near the residential areas of campus. Concentration of parking around the periphery of campus promotes a pedestrian-safe, walkable heart of the campus' southern academic zone. Roads do cut through campus, dividing the southern academic zone from the northern residential zone. Pedestrian crosswalks represent critical safety points along these roads. Similarly, a road and bike/walk path separate the main campus from Lake Bemidji. Though this access road is less traveled, it acts as a point of disconnection between campus and the lake.

A 2011 Parking Supply / Demand Study by Walker Parking Consultants is the most recent concerted assessment of campus parking conditions. It identifies a parking supply of 1,889 spaces with an adjusted peak occupancy of 1,870 vehicles. To be more neighborly to nearby residences and improve parking safety, the study recommends a residential parking permit program. While the study identifies locations for potential future parking ramps in anticipation of future growth, more recent input collected from campus and community stakeholders during campus resilience planning conversations suggest there is adequate parking on and around campus. This sentiment was expressed despite the longer distance to be walked from certain parking locations across campus. Other input included the perception the Bangsberg Hall lot, which currently provides 25% of total campus parking, may be oversized. This lot is also in need of renovation due to its deteriorating condition.

Quantity of campus parking has a correlation with campus stormwater runoff as hard, impermeable surfaces shed water directly into Lake Bemidji. Stormwater runoff often collects and washes contaminants into the lake. Though direct reduction of paved surfaces is the most straightforward and permanent approach, reducing contaminant intrusion can be mitigated by raingardens, sedimentation basins, and other stormwater best-management practices. A unique parking condition exists during winter months, when Lake Bemidji becomes supplemental parking near the southern academic zone of campus. While concerns about contaminants and litter from vehicles entering Lake Bemidji, and the unsightly nature of this parking are felt by some, the opportunity to park close to campus at no cost is a cherished part of campus culture for others.

Students without a personal vehicle have limited options for facilities when it comes to walking. While there are grocery stores within a 20-30 minute walk from campus, the more affordable options for students, such as Walmart and Target are over 30 minutes from

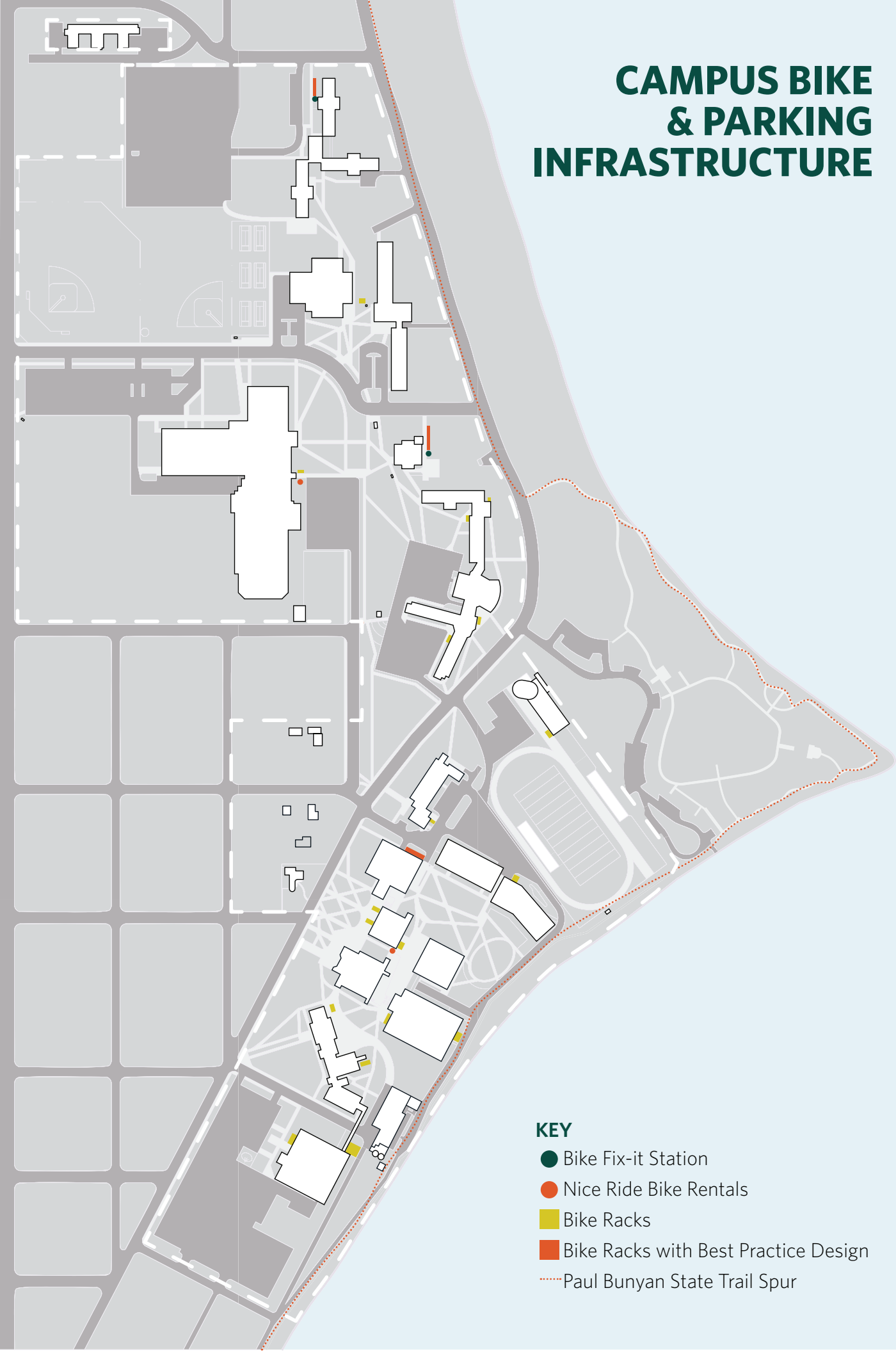
campus. Notably, the Sanford Medical center also lies outside the walking range, making access to medical services not offered on campus more difficult. Some local recreational and event areas, such as Diamond Point Park, Paul Bunyan Park, and Rail River Folk School, as well as downtown Bemidji and its assortment of local businesses and restaurants are within walking distance of campus. Students and staff interested in walking to and from campus often have to cross the busy Bemidji Ave N.

“Connection to transportation – in particular bike and ped friendly facilities – is critical to health and wellness. Citizens need to be able to access healthy food, their jobs, and school via walking and biking.”

“Nice ride bikes and bike fix it stations are tourist focused. These need better accessibility to the broader community.”



CAMPUS BIKE & PARKING INFRASTRUCTURE



KEY

- Bike Fix-it Station
- Nice Ride Bike Rentals
- Bike Racks
- Bike Racks with Best Practice Design
- ⋯ Paul Bunyan State Trail Spur

CAMPUS BIKE INFRASTRUCTURE

The Bemidji State University campus is separated from Lake Bemidji by a multi-use trail. Students, faculty, and staff have ample access to regional bicycle infrastructure via this trail, which connects with the Mississippi River Trail (MRT) system at the south end of Lake Bemidji. This is one factor that enabled the University to achieve recognition as a Bicycle Friendly University in 2019. Other factors include bicycle parking infrastructure, including two concrete parking pads featuring fix-it stations on the residential end of campus and short and long-term bike rental programs. Improving bicycle parking on the academic side of campus remains a priority, as are other measures to encourage ridership throughout the year for both commuting and recreational purposes.

MOVING FORWARD

Transportation serves a necessary role in the daily lives of all people. For decades, infrastructure focused on car ownership has been the standard for many cities in the United States. With the transportation sector representing a large portion of our greenhouse gas emissions, it is imperative we explore adaptations to infrastructure that will broaden use of alternative transportation options. Especially as it grows, the community may benefit from the creation of efficient, safe infrastructure that serves diverse transportation options, not just personal vehicle use.

We recommend exploring public transportation models that serve both city and rural residents. Additional investment in a bus program or similar public transit system that services community hubs at regular intervals could build equity and alleviate transportation issues faced by those without access to a personal vehicle. Further adoption of roundabouts can decrease emissions associated with idle times and increase the safety of key intersections, especially along Highway 197.

Encouraging walking and biking across the region through expanded bike and pedestrian infrastructure, campaigns to educate drivers about sharing the road, and offering incentives for people who choose to bike or walk to work may all help lower greenhouse gas emissions. These

“Every infrastructure project related to transportation impacts water in the form of runoff or the systems (stormwater, drinking water, etc) that run beneath the road. We need to be innovative in how we design these systems to last and to be efficient, but also take advantage of cleaning up existing issues if we can.”

actions also benefit community health and wellness by reducing air pollutants caused by motor vehicles and encouraging an active lifestyle supportive of physical health. Protecting surface and ground water resources from the impacts of chloride will require additional efforts to reduce the amount of salt used to maintain safe winter roadways.

Promoting electric vehicles (EVs) through expansion of EV charging stations and other EV infrastructure will provide a more environmentally conscious alternative to current passenger vehicles, while preparing the region for the increase in EV ridership in the coming decade.

Reducing greenhouse gas emissions within the community will help the region adapt to a changing climate. Implementing any number of these strategies will support this outcome while also addressing inequities experienced by residents.

