APPENDIX D1: SUSTAINABILITY AND NATURAL RESOURCES

Cultivate Hopkins Comprehensive Plan

APPROVED 11/17/20

Existing Conditions

This section describes existing conditions in the natural environment.

DNR Conservation Corridors

The Minnesota Department of Natural Resources (DNR) has identified a series of Metro Conservation Corridors in the Twin Cities region. The intent of this designation is protection and restoration of key natural lands in the metro area. This will involve initiatives to restore a habitat network in the Twin Cities Metropolitan Area to protect and improve the health of native vegetation, fish and wildlife species.

Conservation Corridors in and around Hopkins include the Minnehaha Creek Corridor running through the northeast corner of Hopkins, and the area around Shady Oak Lake and nearby lakes and wetlands southwest of the city. **Figure D1.1** shows the location of these corridors.

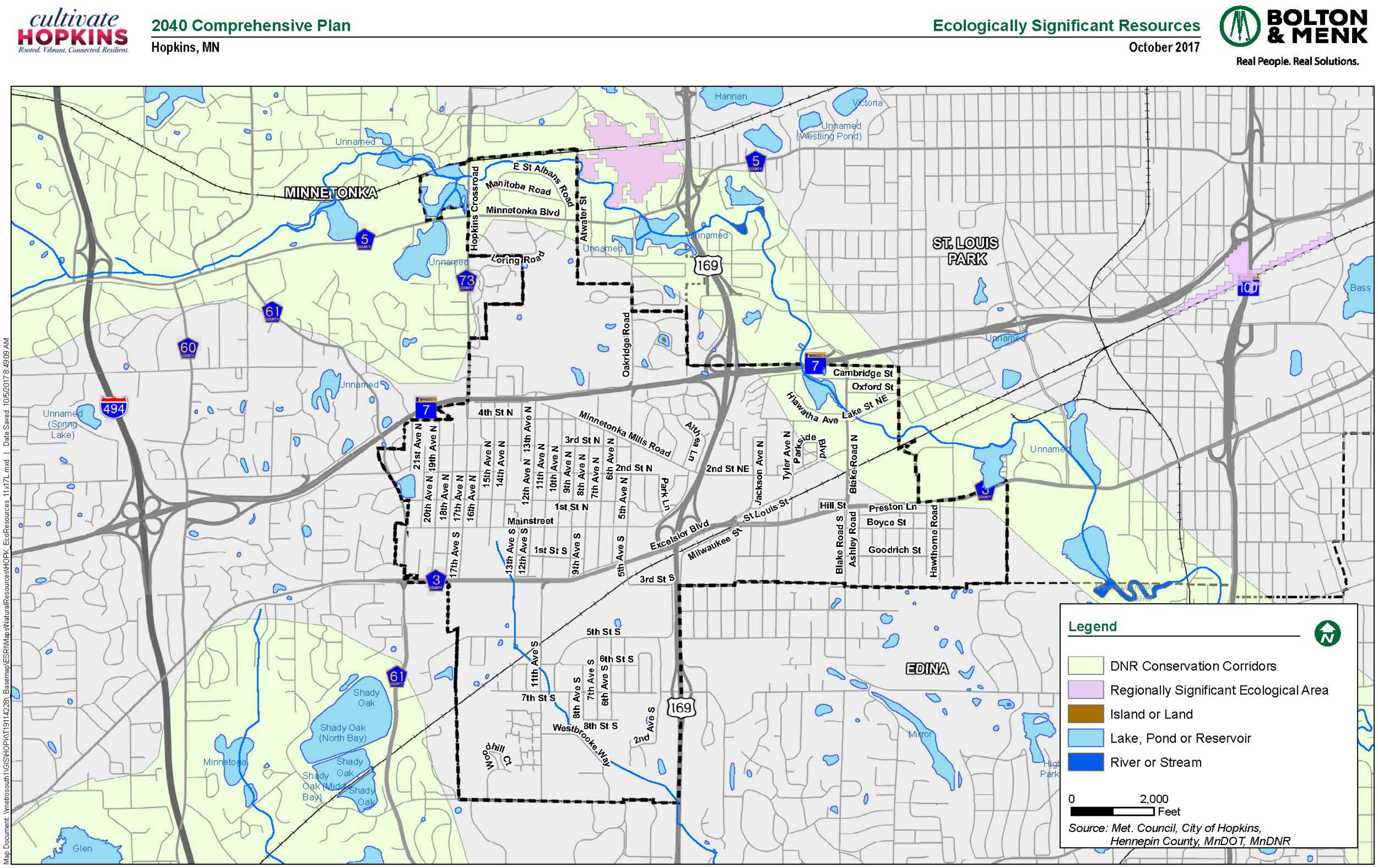
Regionally Significant Ecological Areas

The Minnesota DNR also has identified one area in the vicinity of Hopkins as a Regionally Significant Ecological Area. These areas include places where intact native plant communities and/or native animal habitat are still found in the region and continue to provide important ecological functions such as:

- Habitat for game and non-game, including threatened, endangered, and special concern animals.
- Biological diversity.
- Connectivity in the landscape.
- Groundwater recharge and improved water quality.
- High to outstanding examples of native plant and/or animal Communities or animal aggregations (as mapped by the Minnesota County Biological Survey).

The area near Hopkins is the Minnehaha Marsh, located just northeast of Hopkins along Minnehaha Creek. **Figure D1.1** shows the location of these areas.

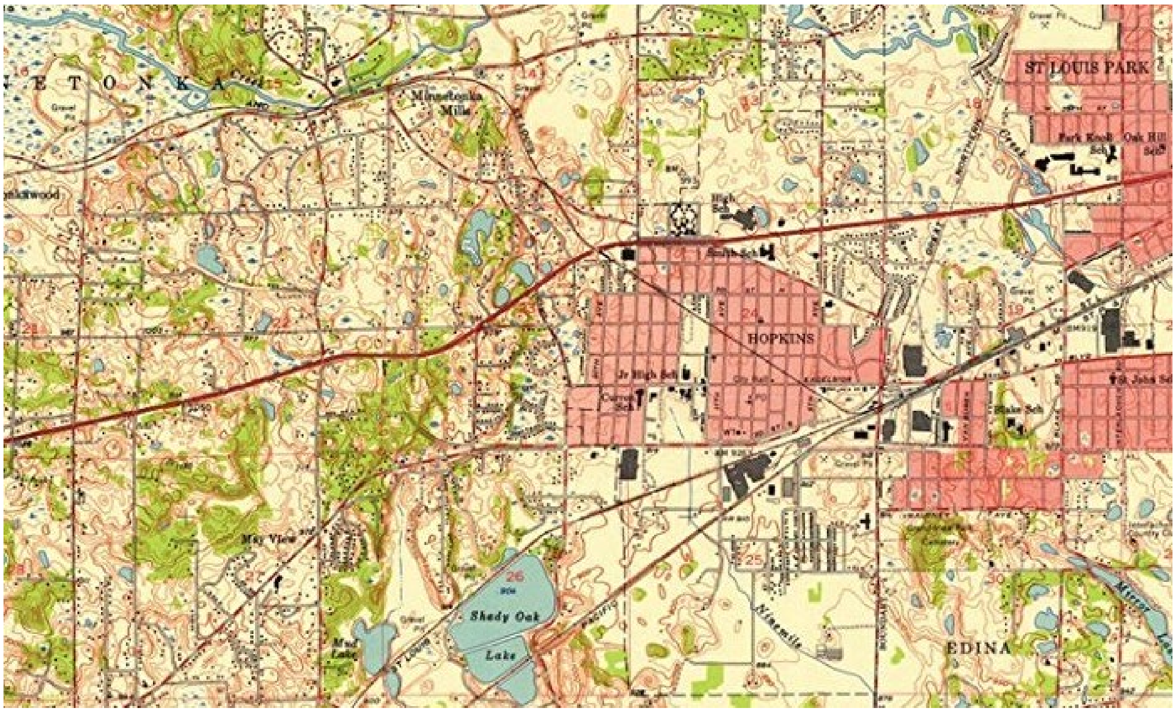
Figure D1.1 – Ecologically Significant Resources



Topography

As in other places, the main railroad line running through this area of the region appears to follow a flatter space through hillier land – likely constructed to minimize steep grades.

The Downtown Hopkins area stands out as well as somewhat flatter than the surrounding area. This may be one of the reasons this location developed sooner than much of the nearby area.



Source: USGS Map

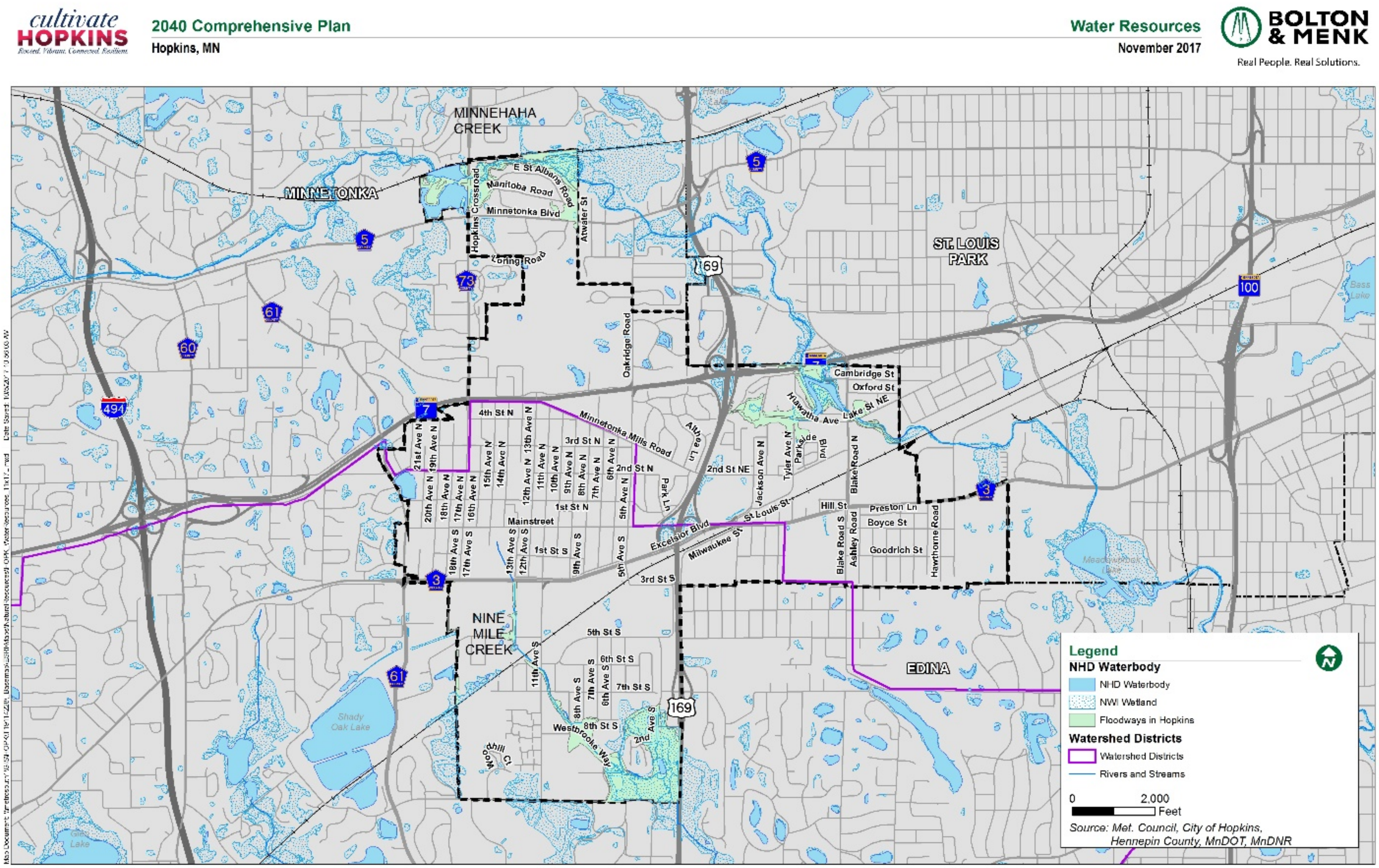
Water Resources

Hopkins contains segments of two creeks: Minnehaha Creek and Nine Mile Creek. There are some small ponds and wetland areas in the vicinity of both creeks, such as the duck pond near 1st Street North and Shady Oak Road.

The drainage patterns around the two creeks reflects the boundary of the two watersheds of the same name, which roughly split the City of Hopkins in half.

Existing conditions related to water resources are explored in more depth as part of the required surface water management plan element of the comprehensive plan, found in **Appendix WR1**.

Figure D1.2 – Water Resources



Historic Wetlands

The oldest available US Geological Survey (USGS) map for Hopkins dates from 1895. As shown below, the community was originally two smaller settlements around railroad stations – Hopkins and West Minneapolis – that eventually merged into one.

Of particular note is the change to the Nine Mile Creek area, south of West Minneapolis. It was originally the northern end of a broad band of wetlands on either side of the creek, stretching down through what is now Edina to Bloomington, where it joined the Minnesota River. Much of that wetland area (including a large percentage of what was in Hopkins) has since been filled and the stream has been channelized. Currently, the “headwaters” of Nine Mile Creek is the City of Hopkins storm sewer system.

This was also true to a lesser extent for Minnehaha Creek, though the impacts of that are largely outside the Hopkins city limits.

While it is not necessarily the goal to restore the location of all historic wetlands, it is useful to know where they were, as this often is reflected in ongoing issues with soils and drainage.

Contamination

As is common for a developed urban area with a substantial amount of older commercial and industrial uses, Hopkins has some issues with environmental contamination. While there are already regulations and practices in place to address them, there are opportunities to prioritize and advance improvements through additional policy guidance. **Figure D1.3** shows the location in Hopkins of impaired waters and contaminated sites.

Impaired Waters

The Minnesota Pollution Control Agency (MPCA) maintains a statewide list of impaired waters that do not meet established surface water quality standards. At present, around 40% of Minnesota's lakes and streams are impaired for conventional pollutants – with a higher percentage in urbanized areas. Each impaired water body is subject to a Total Maximum Daily Load (TMDL) to address these impairments. A TMDL is a regulatory term found in the U.S. Clean Water Act, describing a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards. Watershed districts are typically involved in the oversight of these TMDLs, and the associated improvements implemented to meet their goals.

The entire length of Minnehaha Creek (only around 6% of which is in Hopkins) appears on the state impaired waters list due to elevated levels of fecal coliform bacteria and chloride, as well as its impaired biotic community and low levels of dissolved oxygen. It is subject to a TMDL to address these impairments, which is being managed through the Minnehaha Creek Watershed District.

Nine Mile Creek is also on the impaired waters list because of chloride levels, as well as impaired biota due to low fish Index of Biotic Integrity (IBI) scores. It is subject to a TMDL to address these impairments, which is being managed through the Nine Mile Creek Watershed District.

Land

The Minnesota Pollution Control Agency also tracks sites on land that are potentially contaminated, and/or subject to environmental permits or registrations. Not all of these are currently active (some may already have been addressed), and absence of a flag does not necessarily guarantee a site is clean – since a full assessment has not been done of all properties. The MPCA identifies 447 sites in Hopkins with some risk of environmental contamination and/or environmental permit. The identified sites are summarized in **Table D1.1** and shown on **Figure D1.3**.

Figure D1.3 – Impaired Waters and Contaminated Sites

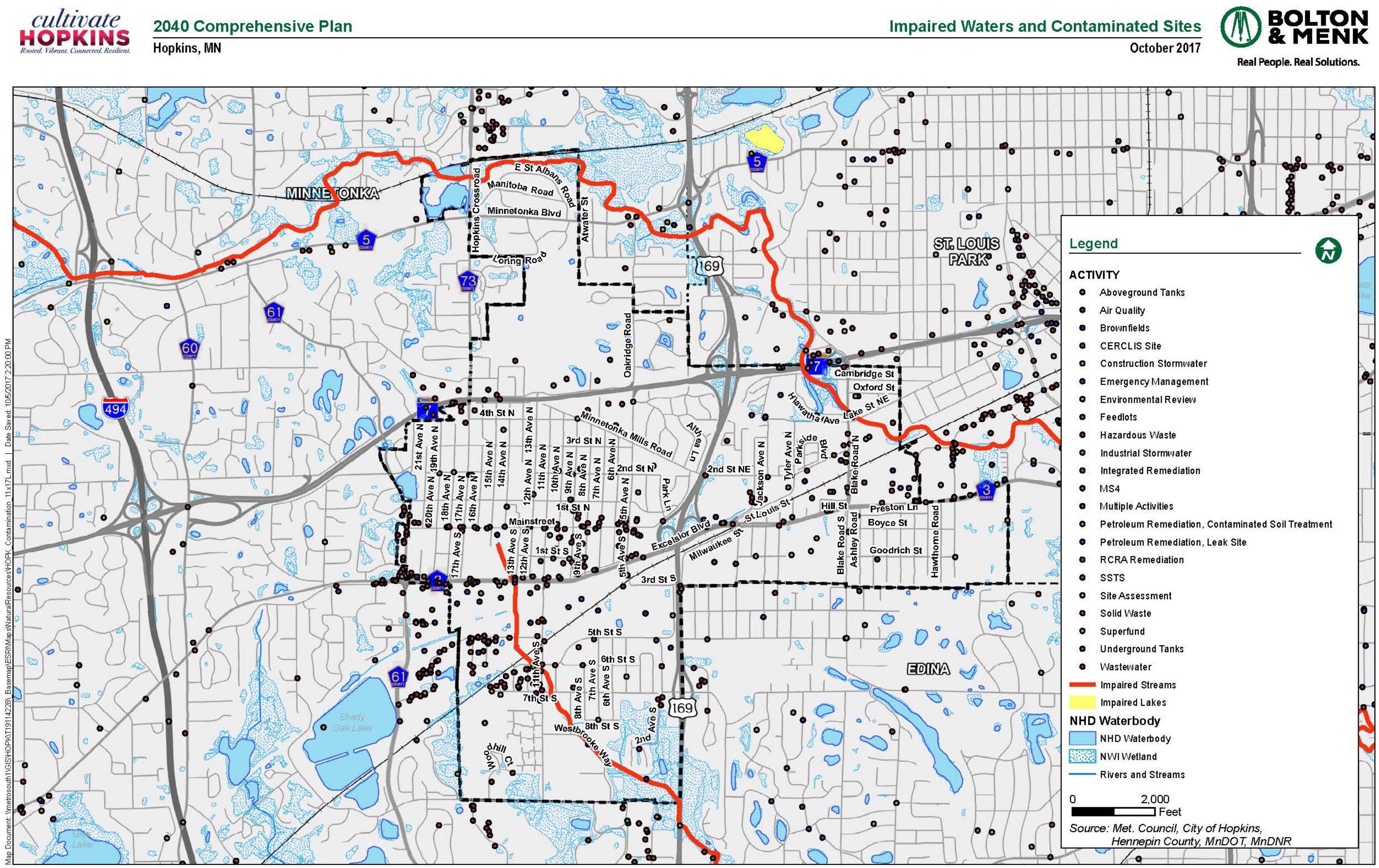


Table D1.1 – Environmental Sites in Hopkins, 2017	
Type	**Number**
Aboveground Tanks	11
Air Quality	5
Brownfields	31
Construction Stormwater	51
Hazardous Waste	157
Industrial Stormwater	10
Multiple Activities	117
Petroleum Remediation Leak Site	30
Site Assessment	4
Underground Tanks	29
Wastewater	2
Aboveground Tanks	11
Air Quality	5
Brownfields	31
Construction Stormwater	51
Hazardous Waste	157
Industrial Stormwater	10

Source: MPCA

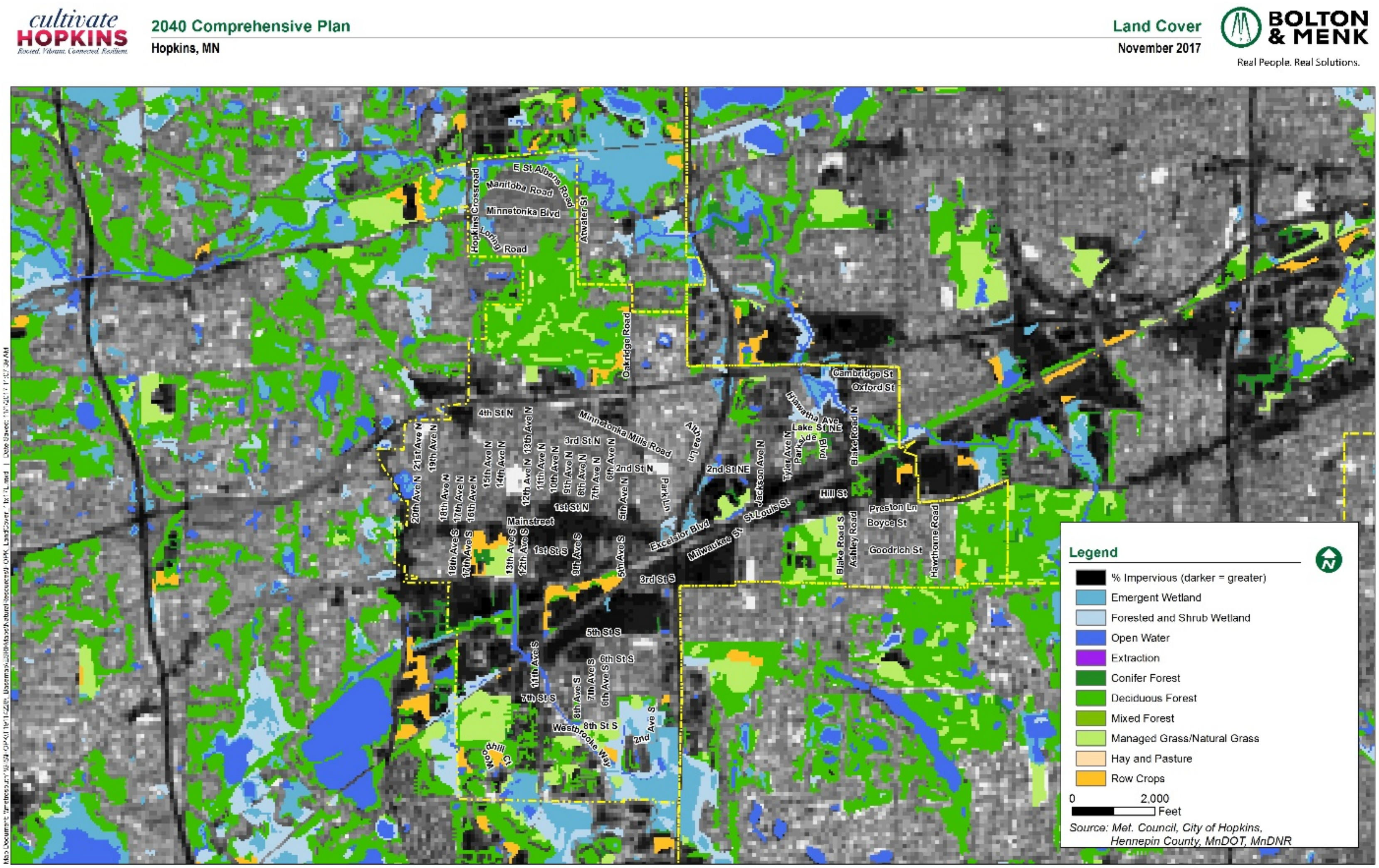
Land Cover

The following map shows a different way of classifying land: the Minnesota Land Cover Classification System (MLCCS). It classifies urban and built-up areas in terms of land cover rather than land use. It identifies the presence of built-up elements, vegetation patterns, and an area's imperviousness to water infiltration.

A substantial amount of the central part of Hopkins shows up as close to 100% impervious (dark gray/black on the accompanying map). This reflects the urban development patterns, particularly industrial sites with little or no landscaping. The resolution on this is not fine enough to capture small spots of pervious land, so many of the residential areas show up as largely impervious as well.

This is not unexpected in a developed urban area. But it does reflect places where there will be challenges with stormwater management – as well as other livability, habitat, and ecological effects of being in an area without much green space or vegetation. There may be opportunities to address this through policy, both in terms of development of private sites and acquisition/reconstruction of public spaces.

Figure D1.4 – Land Cover



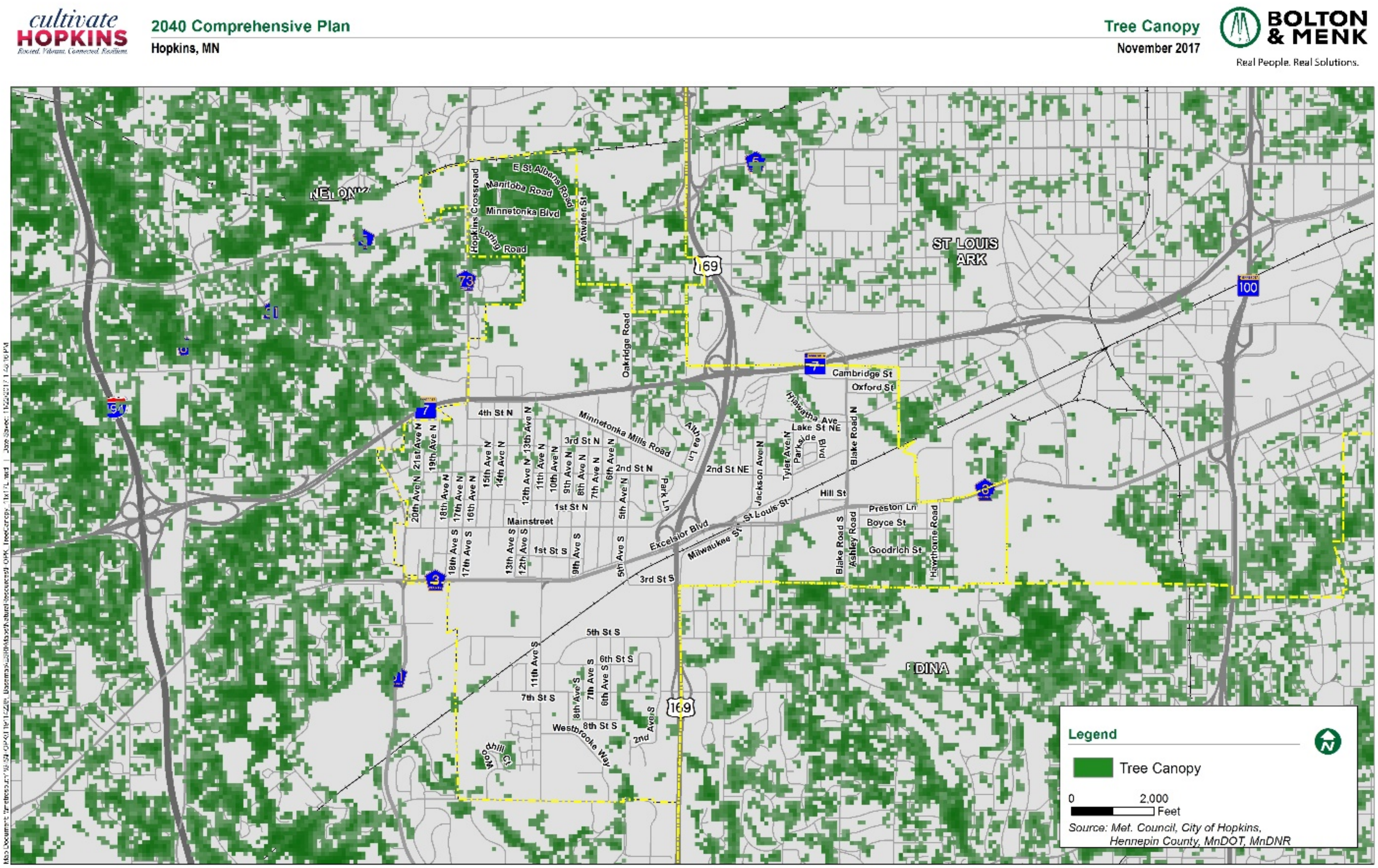
Tree Canopy

The following map shows the urban tree canopy in Hopkins. It is worth noting that the resolution on this map is not fine enough to reflect all the trees in the city, particularly in boulevard areas. However it does show a significant difference between neighborhoods, especially in contrast to neighboring communities such as Minnetonka and Edina.

There are many environmental benefits to maintaining an urban tree canopy, including improving air quality, serving as a natural air conditioner, facilitating water filtration and retention, and providing wildlife habitat. Studies have also shown that the presence of tree canopies adds value to neighborhoods, encourages active recreation, and even reduces stress.

While a more detailed accounting would be needed to look at the presence of trees citywide, there is basis for prioritizing the development and maintenance of a tree canopy, particularly in areas where it is currently lacking.

Figure D1.5 – Tree Canopy



Energy

The City of Hopkins' existing energy conditions were assessed in mid-2017 by the Great Plains Institute, as part of the Minnesota Local Government Project for Energy Planning (LoGo PEP) program. This program builds upon existing efforts to engage local governments in committing to actionable strategies for energy and greenhouse gas emission reductions. LoGoPEP provides communities with planning tools and actual results to measure progress toward their goals. The following information is excerpted from a report generated through this program.

Hopkins is a Step 3 GreenStep City and is committed to building a sustainable community. The city is interested in better understanding how energy is consumed in its community so it can implement strategies to reduce energy consumption and increase clean energy production, and to reduce greenhouse gas (GHG) emissions from buildings and transportation. The information for this report includes data from the Regional Indicators Initiative (2013) and Xcel Energy's Community Energy Reports (2016).

Energy Use Profile

Businesses and residents in Hopkins are served by Xcel Energy for electricity and CenterPoint Energy for natural gas. The types of energy used in Hopkins for buildings and industrial processes are primarily electricity and natural gas. Few residents may use heating fuel, biomass, or propane as their primary heating source, but that is not captured in this report. Figure 1 demonstrates that consumers use more natural gas than electricity, with 60% of the energy consumed in buildings coming from natural gas. Natural gas is primarily used for space and water heating, cooking, and various industrial processes.

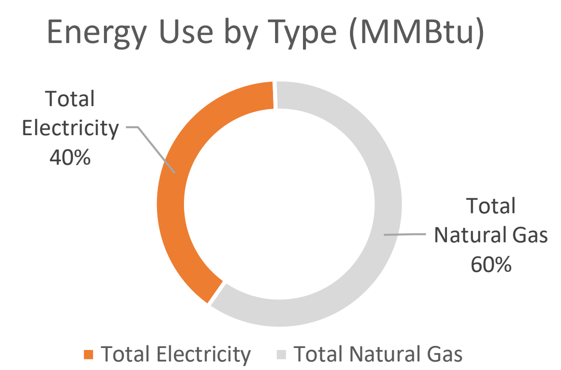


Figure 1 Data Source: 2013 Regional Indicators Initiative Report, 2016 Community Energy Report from Xcel Energy

Electricity is used for appliances, water and space heating, space cooling, lighting, commercial and industrial processes, as well as other electronic devices. Figure 2 illustrates that commercial consumers use a greater share of total energy than residential consumers. The commercial sector makes up 71% of total commercial energy use (natural gas and electricity).

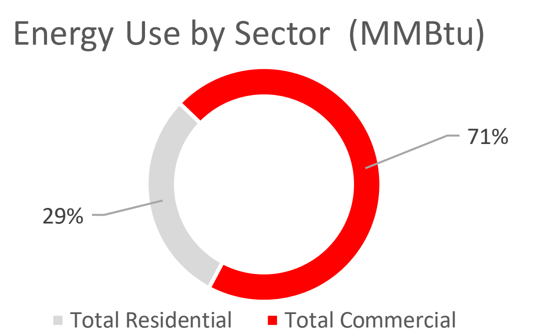


Figure 2 Data Source: 2013 Regional Indicators Initiative Report, 2016 Community Energy Report from Xcel Energy

According to the Community Energy Report from Xcel Energy, Hopkins residents and businesses spent $20.8 million on electricity in 2016; an average of $771 per household, $4,975 per commercial customer, and $43,830 per industrial customer. This information is not available for natural gas use at this time. According to the Energy Information Administration, Minnesota households spent $1,108 on electricity in 2015, and Minnesota businesses spent $7,585, on average.

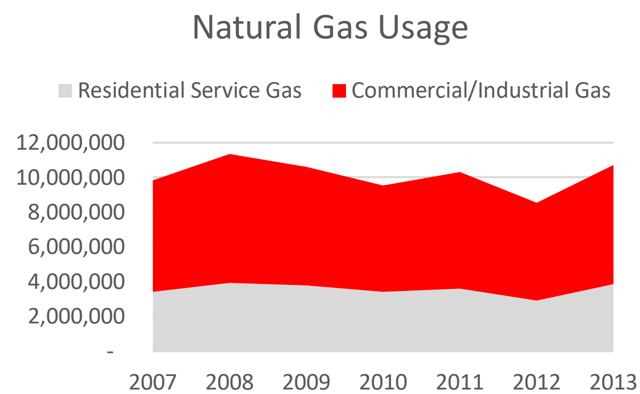
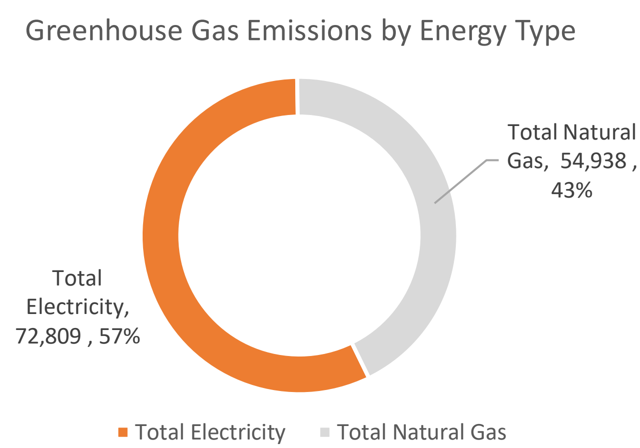


Figure 3 Source: CenterPoint Energy

There are 8,290 residential customer accounts and 1,152 commercial customer accounts in Hopkins. Consumption of natural gas has largely remained steady between 2007 and 2013. Natural gas is the primary fuel for space heating. In Minnesota it is especially important to have reliable and affordable heating systems. Inefficient homes and high energy costs have a greater impact on low- and moderate-income residents who are less able to respond to such changes and bear a greater energy burden (energy costs as a percentage of total income) than higher income residents.



Greenhouse gases (GHG) are emitted from burning conventional fuels like coal and natural gas, which are both inputs in the production of electricity. GHGs are also emitted from burning natural gas, propane, or fuel oil for the purpose of space and water heating, as well as cooking and other uses. Figure 4 indicates that the greatest source of GHG emissions from all buildings (commercial and residential) in Hopkins (57%) come from consumption of electricity as compared to heating fuels.

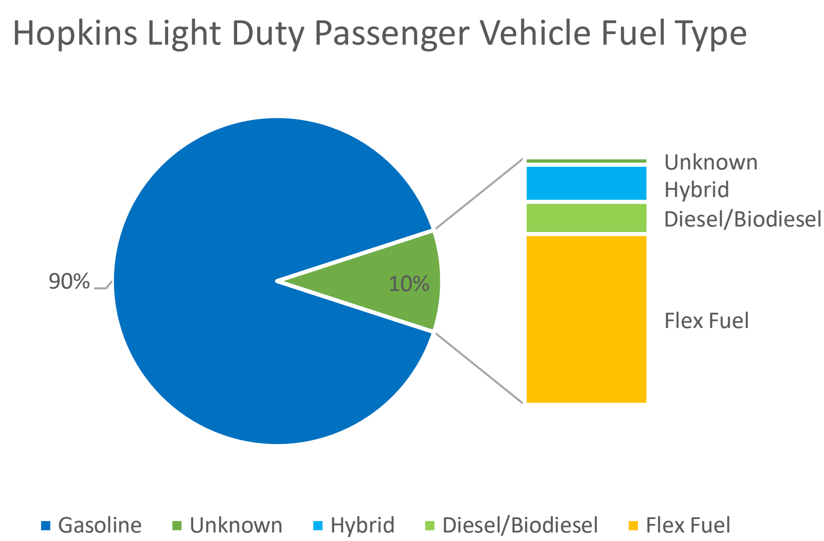
Using carbon free (wind and solar) or carbon-neutral (biomass) energy sources and investing in energy efficiency can significantly reduce the amount of greenhouse gases that are attributable to building energy use. Hopkins' electric energy supply is getting cleaner as Xcel Energy adds more clean energy each year. Developing local clean energy capacity for homes and businesses, or through mechanisms such as community shared solar systems, is an alternative to a supply-side effort.

The commercial sector makes up 72% of the GHGs emitted from building energy use. Because there are fewer business customers, there is greater opportunity to reduce GHG emissions among fewer large commercial customers than there is residential. Much of those emissions are from industrial processes.

Transportation Energy Use Profile

Transportation energy is almost exclusively attributable to car and truck travel, and is estimated by the vehicle miles traveled (VMT) within the city boundaries (regardless of through traffic or with an origin or destination in the city).

The VMT includes commercial and freight vehicles, personal cars, and mass transit vehicles. VMT does not capture energy attributable to rail and airplanes, but those are generally a very small portion of transportation energy. Regional Indicators Initiative data shows that 93,604,485 vehicle miles were traveled within Hopkins in 2014. The greenhouse gas emissions associated with this travel is approximately 41,794 tonnes of CO_2, or about 25% the city's total GHG emissions. The U.S. Department of Energy reports that there are 15,500 light duty vehicles in the Hopkins market with an average fuel economy of 23.4 miles per gallon. 90% of these vehicles use gasoline as the primary fuel; flex fuel (e85) makes up the next highest fuel source.



Greenhouse Gas Emissions Summary

The energy use data gathered for building energy consumption and transportation illustrate a clear picture of the major sources of GHG emissions in the community, as seen in Figure 6. The largest share of emissions come from residential and commercial (buildings) energy consumption, making up 75% of total emissions. Broken down by sector, residential energy use accounts for 21% of emissions, while the commercial sector emits 54% of all emissions. Transportation makes up 25% of total emissions.

Additional sources of emissions not included in this graph are those associated with regional facilities such as air travel, solid waste, and wastewater treatment. While these sources are significantly smaller than those evaluated in this report, a GHG inventory that meets the U.S. community protocol or the Global Protocol would consider these emissions. The city can determine whether to conduct the additional analysis to be compliant with the protocol as part of a deeper GHG inventory.

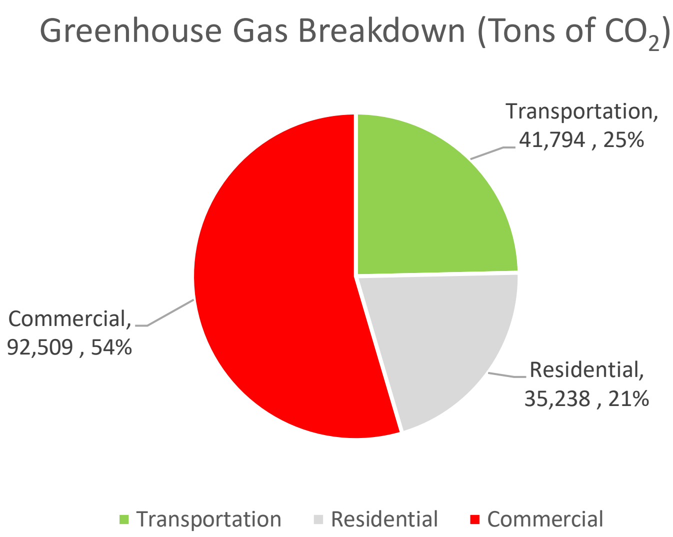


Figure 6 Data Source: 2013 Regional Indicators Initiative Report

Efficiency Resource

The city's efficiency resource is measured by looking at current energy use. The greater the energy consumption, the greater resource available for Hopkins to be more efficient. As noted in the energy use profile, the energy use - and therefore the efficiency resource - is largest in businesses as compared to households. Energy use in the commercial and industrial sector is 55% of the city's total building energy use. Further, electricity is a greater use among businesses, while heating fuels dominant residential energy use. It is also important to note that while commercial buildings consume a majority of the energy, they comprise only 20% of the square footage, and represent little over 10% of the number of buildings in the community.

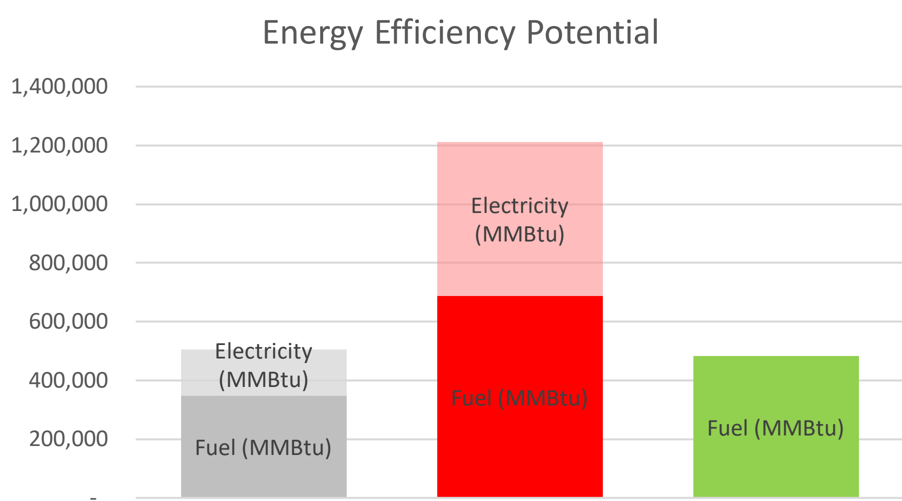


Figure 7 Source: RII 2013, and Xcel CER 2016

Focusing on commercial and industrial building energy use is a potentially high-impact strategy for capturing the city's efficiency resource; a single successful efficiency investment could reap the efficiency benefits of dozens of residential successes. Residential building efficiency opportunities tend to be more standardized than commercial use, even if the efficiency resource is distributed across many buildings rather than being concentrated in relatively few. Residential efficiency opportunities are in building envelopes, heating and cooling equipment, lighting, appliances, and plug loads. These uses have efficiency solutions that do not need to be customized, and can reduce typical residential household use by 20-25%.

Xcel Energy offers incentives to residential and business customers to help increase energy efficiency action. Participation rates for these programs can be found in the Community Energy Reports. For Hopkins, 2016 participation rates by businesses and residents are summarized in **Table D1.2**.

Table D1.2 – Participants in Xcel Energy's Rebate Program		
Sector	**Rebates Given**	**Electricity Savings (kWh)**
Business	46	2,688,030
Residential	139	93,763

Transportation efficiency is another significant resource, as travel comprises 25% of the city's GHG emissions. GHG emissions can be reduced with three distinct strategies:

- fuel switching to a low-carbon or carbon-free fuel;
- improved efficiency (miles per gallon) or right-sizing vehicles to the vehicle use;
- mode shifting, or increased use of non-motorized or transit options.

Electric vehicle markets are poised for rapid expansion over the next decade and the city has opportunities to accelerate market transformation and reduce GHG emissions associated with transportation fuels and vehicle use. For example, including EVs in city fleets, investing in public charging stations, and promoting EV benefits can help drive consumers to choose electric vehicles.

Improved efficiency in vehicles is likely to occur via increased use of hybrid models. These still burn gasoline, but have long-ranges and now come in a variety of vehicle types used by residents and businesses.

Hopkins is already well attuned to creating opportunities for mode-shifting, particularly related to creating pedestrian and bicycle friendly transportation infrastructure and urban design. There will be additional opportunities for the city to expand transit-oriented development as Metro Transit expands light rail service through the community.

Solar Resource

The University of Minnesota developed a high-resolution statewide solar resource map that allows cities to calculate how much electricity they could potentially receive from locally installed solar energy systems. These data (see map, next page) were used to calculate Hopkins' solar resource, or the city's "solar reserves." The solar reserves are how much solar energy is reasonably economically available for development, similar to how oil or gas reserves are measured. The solar map shows the good sites for solar installations and helps identify where there may be land use conflicts with solar development. **Table D1.3** shows the amount of solar energy reasonably available for development in Hopkins. The gross potential includes the total available resource, regardless of location; rooftop capacity and generation include only the resource available on the rooftops of commercial buildings located in the city.

Table D1.3 – Hopkins Gross and Rooftop Solar Generation Potential	
Total Generation Potential (MWh/year)	5,402,574
Rooftop Potential (MWh/year)	1,115,902
Gross Generation Potential (MWh/year)	540,257
Roof Generation Potential (MWh/year)	111,590
Commercial Rooftop Potential (MWh/year)	86
Top 10 Rooftop Potential	30,195

The total capacity of the commercial rooftop solar resource in Hopkins is 86 MW, equal to approximately 55% of all the electricity consumed in the city. This means that if the city wanted to maximize its entire commercial rooftop solar resource, it could set a solar generation goal of up to 55% on-site solar generation (this is an upper limit, and does not consider individual site limitations due to roof structure, ownership, or local regulations that might limit solar installations). If buildings undergo high levels of energy efficiency investment, the solar resource could meet a higher percentage of electric needs. The efficiency and solar resources are, in this analysis, calculated independently of each other.

Solar installations are not limited to rooftop applications. This analysis does not include ground-mount systems, but the city will want to develop criteria for where they would and would not allow solar installations. For instance, commercial parking lots may make good solar resources, or public right of ways; while areas planned for future development or park space may not. These criteria can be used to recalculate potential solar generation and redefine future solar goals for local development. The implementation section of this plan provides guidance for the potential future development of more specific goals and benchmarks around solar and other renewable energy usage in Hopkins.

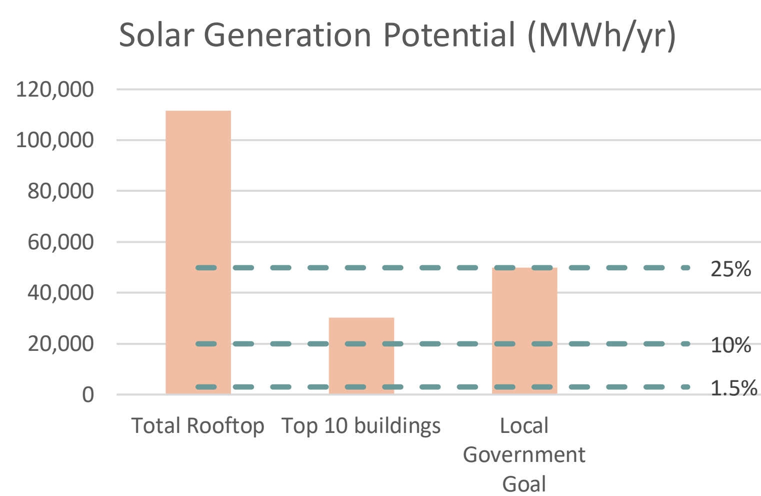


Figure 8 City of Hopkins solar generation potential

Gross Solar Potential
City of Hopkins, Hennepin County

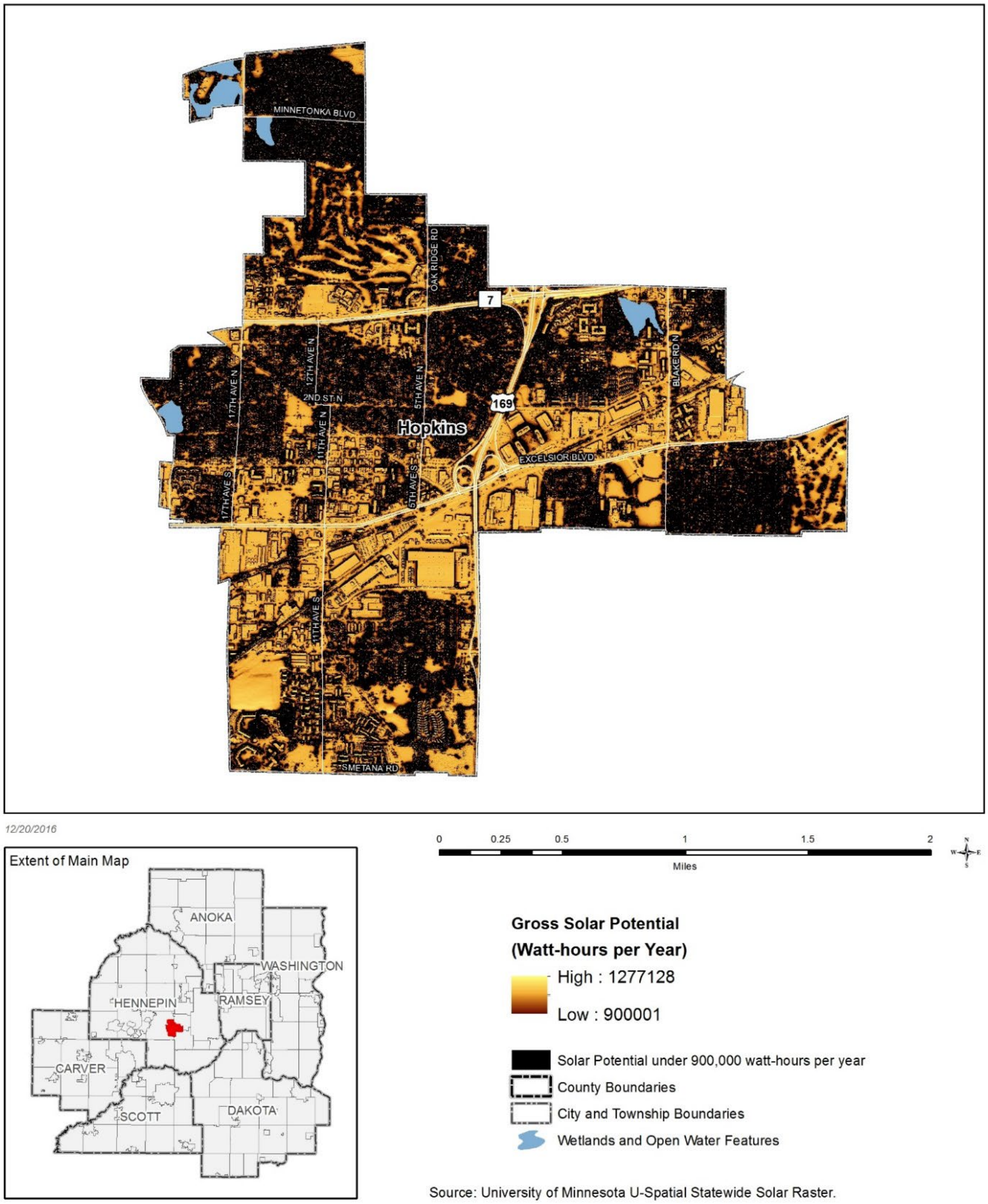


Figure 9 Solar Resource Map, Metropolitan Council Community Page

Wind Resource

Wind Resource

A good wind energy site needs to meet a number of characteristics, the most important of which is a good wind resource. Other characteristics include soils that can support the weight of the turbine; a site large enough to accommodate safety setbacks from neighboring properties, structures, or other uses; and surrounding land uses for which the visual impact and potential nuisances will not create a conflict. Regarding the wind resource, the height of the rotor needs to be above any disturbance within an ideal radius of 500 feet. The Distributed Wind Energy Association offers this guidance:

> The industry guidance on minimum wind turbine height states that the lowest extension of a wind turbine rotor must be 60 feet above the ground, assuming no surrounding obstacles. Where obstacles are present, the wind turbine rotor should be at least 30 feet above the tallest obstacle within a 500-foot radius. If trees are not fully grown, then the tower height must be adjusted for the growth over the next two or so decades, the life of the wind turbine.

Hopkins is a suburban community with small town characteristics and varying suitability for towers above a certain height. The Minnesota Department of Commerce developed wind speed maps at a 500-meter resolution to give a general sense of the wind resource at various tower heights. These maps are not adequate for a specific site assessment (Figure 10).

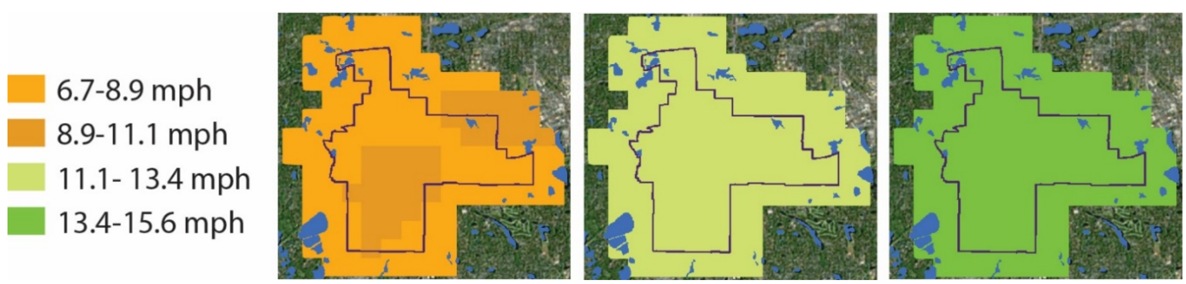


Figure 10 Wind speeds at different tower heights, 30 meters, 80 meters, and 100 meters from left to right. Source: MN Department of Commerce

A good rule of thumb is that 12 mph is typically the minimum average annual wind speed for a good wind resource. At 30 meters, much of Hopkins has an average wind speed of less than 9 miles per hour, below the optimal speed needed for a productive wind energy system, suggesting that taller towers would be necessary from a production standpoint. At 80 meters, wind speeds are between 11 and 13 mph, and at 100 meters, wind speeds are up to 13-15 mph. While there may be some opportunity to capture the resource at taller tower heights, it may not be feasible in Hopkins. The taller towers would require deeper foundation, which may not work in areas where the water table is too high. Additionally, the community may run into resistance if residents do not agree that tall wind turbines fit the community's character.

While the city does not have many opportunities for wind energy development, residents and businesses can participate in Xcel Energy's Windsource® or Renewable*Connect programs. These programs provide the clean energy benefit of having local wind (and solar) energy, although the economic benefits of clean energy development are realized elsewhere. According to Xcel Energy, two businesses are subscribed to a total of 16,207 kWh of wind energy, 296 residences are subscribed to a total of 609,390 kWh of wind energy.

Biomass Resource

Fuel derived from biomass can be used in several processes as a source of renewable energy, including electricity, waste heat, and renewable gas. Minnesota has several facilities that use biomass to generate electricity and/or heat. Biomass resources include municipal solid waste, landfill gas, wood waste, and agricultural byproducts, food processing residue and other organic waste. Much of the biomass resource can come from the metropolitan area, particularly for solid waste and landfill gas, as well as yard and urban forest waste.

Information about the type of biomass resources at the community level is difficult to acquire; there is little standardized assessment of potential biomass resources, and the types of resources vary across communities. All of the refuse that is not recycled or composted in Hopkins goes to one of two waste-to-energy facilities: Hennepin Energy Resource Company or NRG Elk River (NSP) Resource Recovery. In its draft master solid waste management plan, Hennepin County seeks to expand organics recycling by adding capacity to receive, transfer, and process organics close to where the materials are generated and collected. Organic materials are the largest portion of trash, making up approximately 25% of the waste stream. As part of its strategies, the County will release a request for proposals for an anaerobic digestion project to be in operation no later than the end of 2022. The County is looking at technologies to create renewable, bio-based energy and green chemicals.

Biomass as Renewable Energy

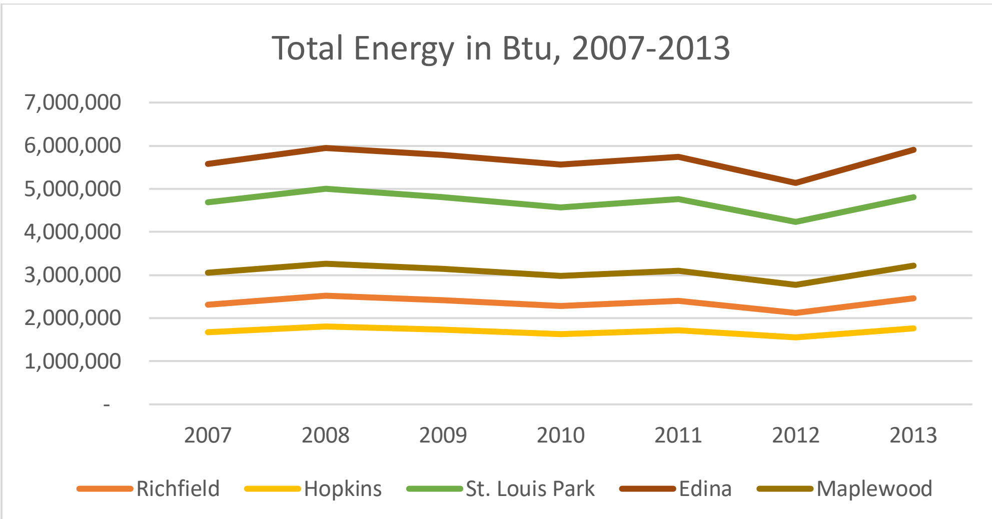
Anaerobic digestion is a process that uses captured biogas (methane and carbon dioxide) from the decomposition of organic material to generate heat and/or electricity. Biogas generated from this process can also be cleaned to remove carbon dioxide and other impurities to produce a renewable product equivalent to conventional natural gas, referred to as renewable natural gas. Renewable natural gas (or biogas) can serve as a replacement for any natural gas application and can also be compressed to provide a source of transportation fuel in place of conventional natural gas.

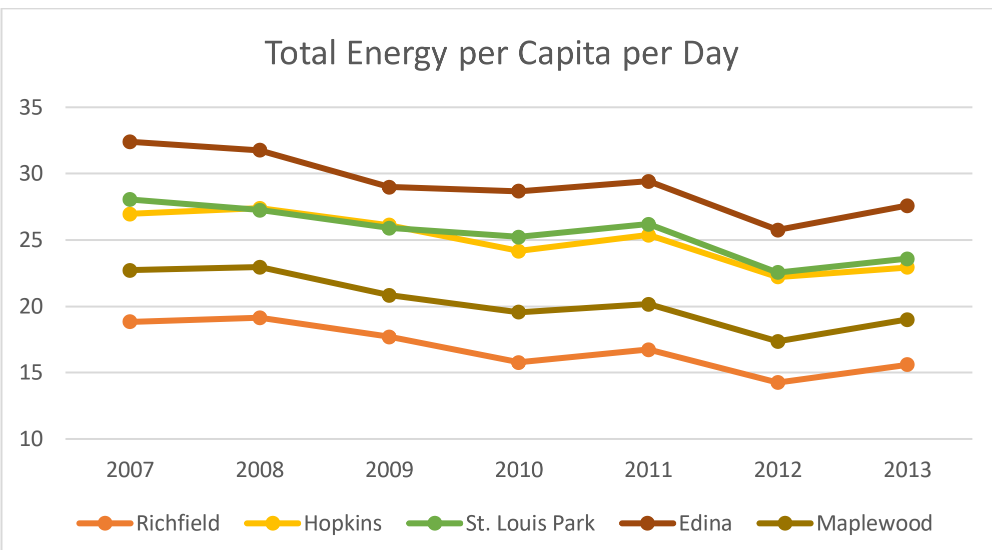
Biogas can be used to generate electricity in a process called combined heat and power. Combined heat and power (CHP) systems simultaneously generate electricity and thermal energy within a single system. By using the thermal energy, CHP systems efficiency is much greater than conventional power generating systems. While this system is well established in Minnesota, there is still great potential to harness this resource. Benefits CHP application include:

- Power is produced at a cost below retail electricity
- Enhance local power reliability
- Produces more useful energy than biogas that is used solely for thermal loads
- Reduces greenhouse gas emissions and other air pollutants

Energy Comparisons to Other Cities

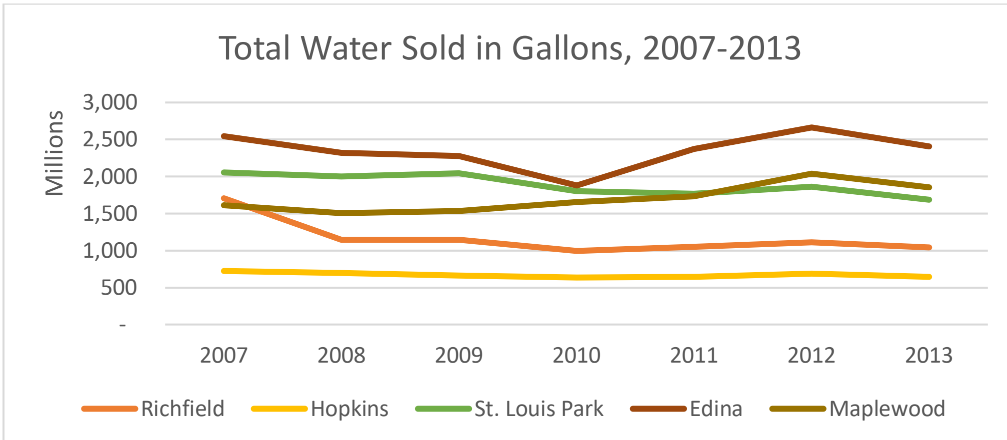
Hopkins has the lowest total energy use among comparable and neighboring communities. Energy use in Hopkins gradually decreased between 2008 and 2012 and saw an increase in use in 2013; this trend is also seen in neighboring and comparable communities. Hopkins' commercial energy use is greater than its residential energy use. However, Hopkins has a somewhat higher per capita/per day energy use than comparable and neighboring communities. In 2013, the average Hopkins household consumed 174.5 kBtu of energy per day, which is about 14 tonnes of CO_2.

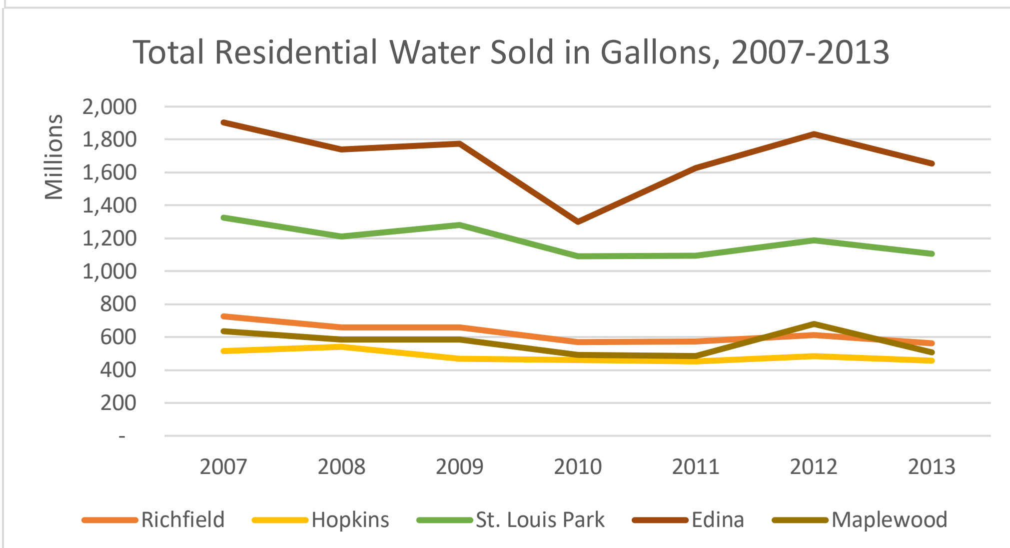


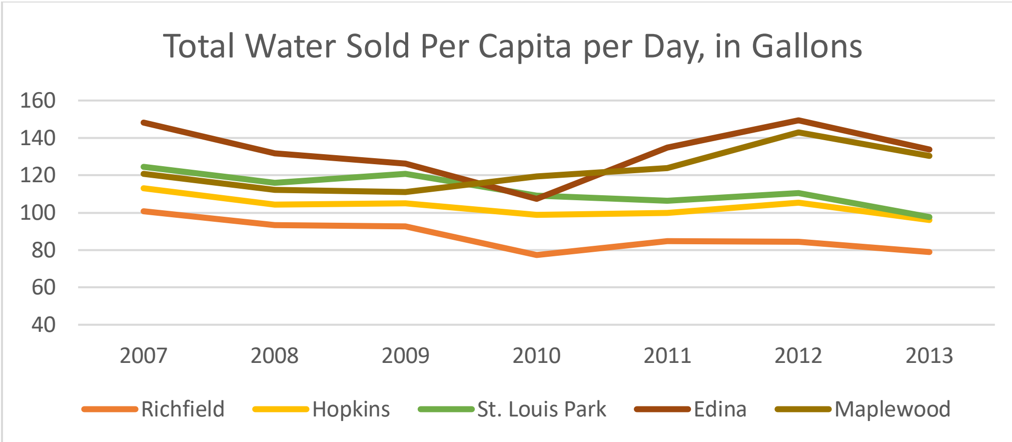


Water Use

Hopkins has the lowest water use among comparable and neighboring cities. Hopkins' water use has gradually decreased since 2007. Unlike energy, residential water use is higher than commercial/ industrial water use. In 2013, water use in Hopkins was about 96 gallons per capita per day.



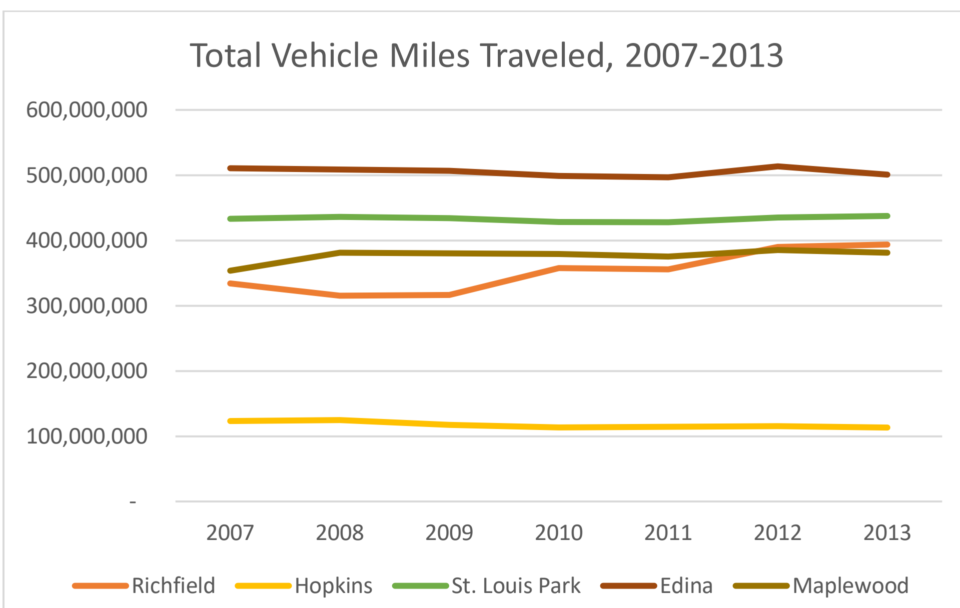


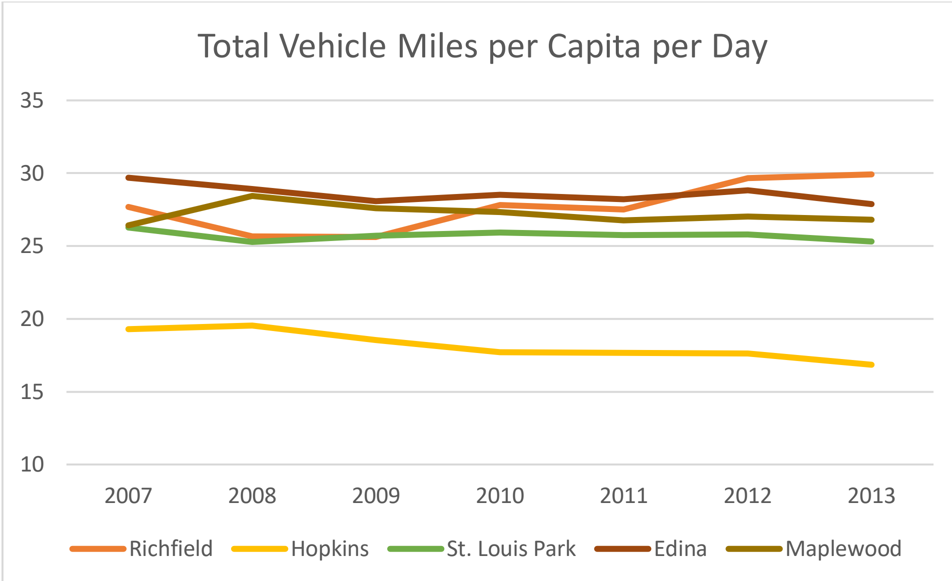


Vehicle Miles Traveled

Hopkins residents travel much fewer vehicle miles annually than residents in nearby and comparable cities. As a result, Hopkins has fewer CO_2 emissions due to vehicle travel. Interestingly, per capita vehicle miles traveled by Hopkins residents has been decreasing since 2007. Most other comparable cities have remained at a fairly constant rate, except Edina, who has also decreased per capita vehicle miles. The low vehicle miles traveled may be a testament to the strength of public transit routes in Hopkins. If so, vehicles miles traveled and their respective CO_2 emissions will likely continue to decrease with the opening of the Green Line Extension LRT.

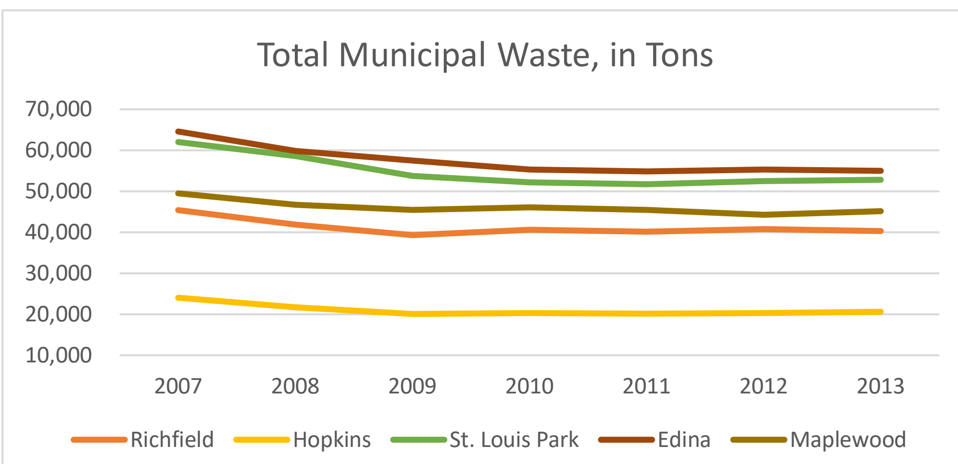
In both 2013 and 2015, about 5% of Hopkins households lacked access to a vehicle. Most households have 1-2 cars (American Community Survey, 2009-2013; 2011-2015.). An On The Map analysis of Hopkins residents commuting patterns in 2013 shows about 74% of Hopkins residents lived less than 10 miles from their work, which helps reduce total vehicles miles traveled regardless of mode of transportation used.

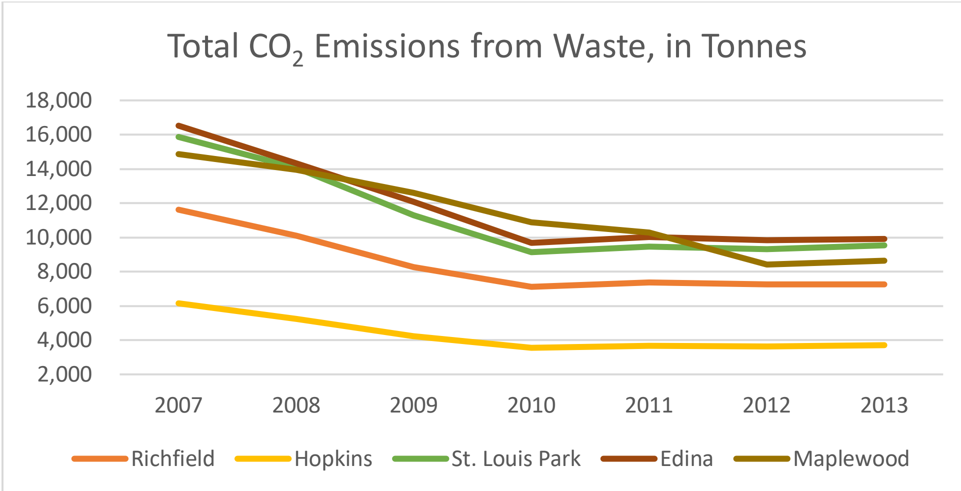




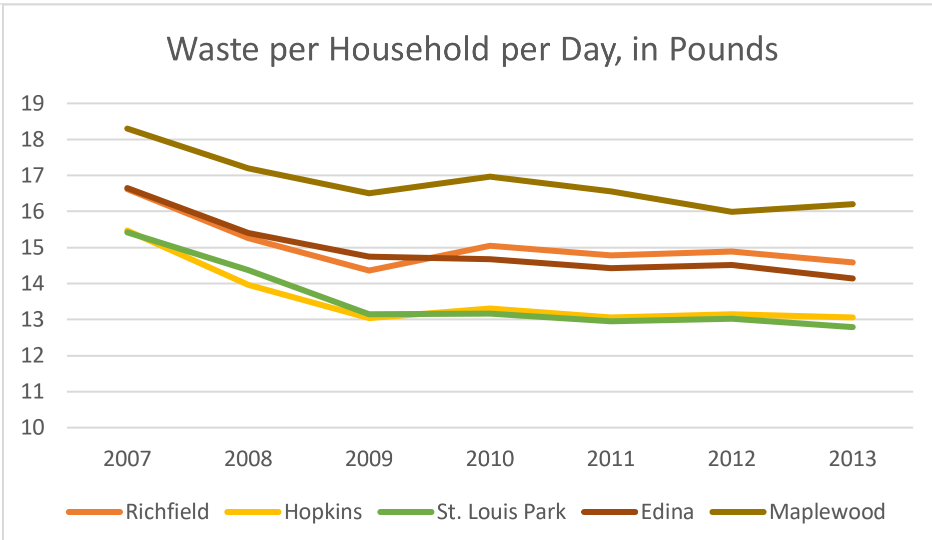
Waste Production

Hopkins has much less municipal waste than neighboring and comparable communities. As a result, the City has fewer CO_2 emissions from waste. The trends in available data witnessed in Hopkins are also seen in other neighboring and comparable communities. Most communities have somewhat plateaued in waste reduction efforts. Most communities cut tons of waste and tonnes of CO_2 emitted from 2007-2009/2010 but have struggled to make further reductions. Waste per household per day has decreased in Hopkins and other neighboring and comparable communities, but the rate of reductions decrease after 2009. In Hopkins, the amount of landfilled and incinerated trash has decreased while the amount of recycled trash has remained fairly constant.

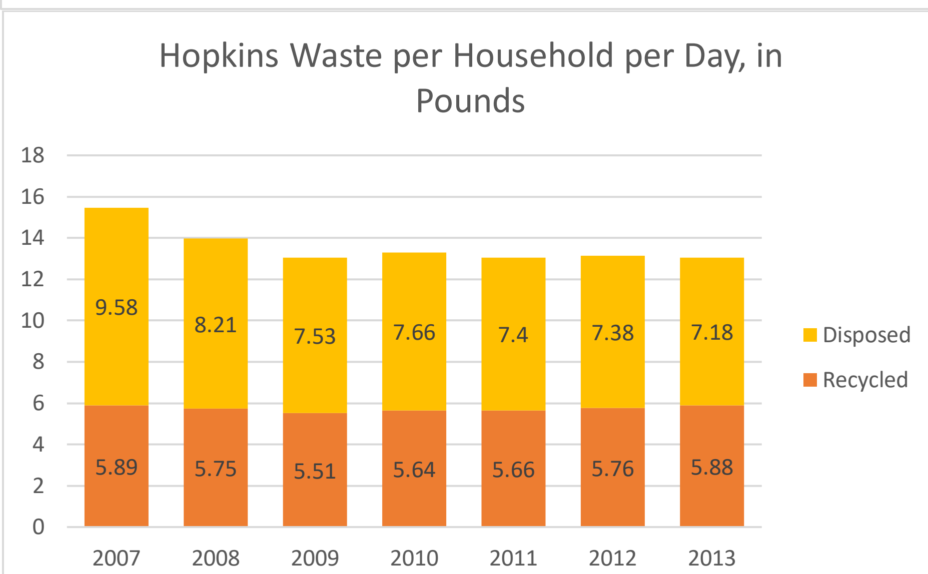




Total CO_2 Emissions from Waste, in Tonnes
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
2007
2008
2009
2010
2011
2012
2013
Richfield
Hopkins
St. Louis Park
Edina
Maplewood



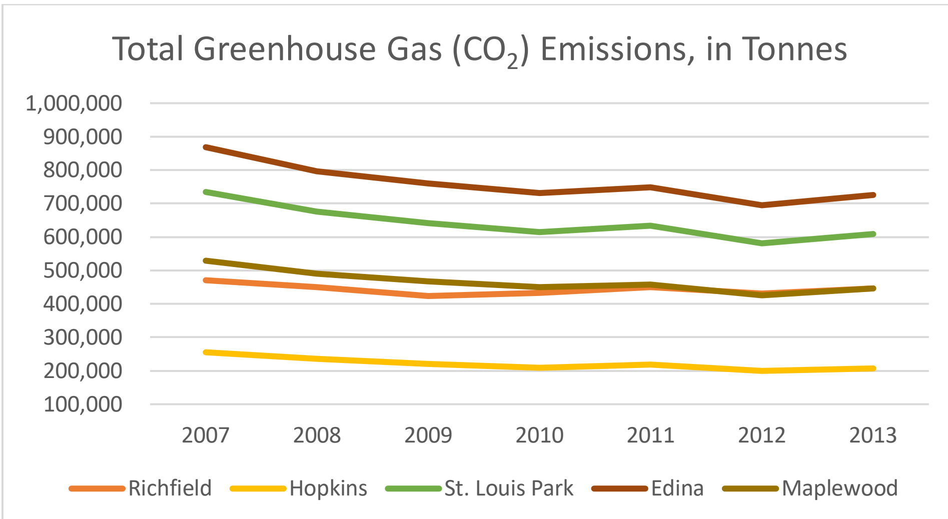
Waste per Household per Day, in Pounds
19
18
17
16
15
14
13
12
11
10
2007
2008
2009
2010
2011
2012
2013
Richfield
Hopkins
St. Louis Park
Edina
Maplewood

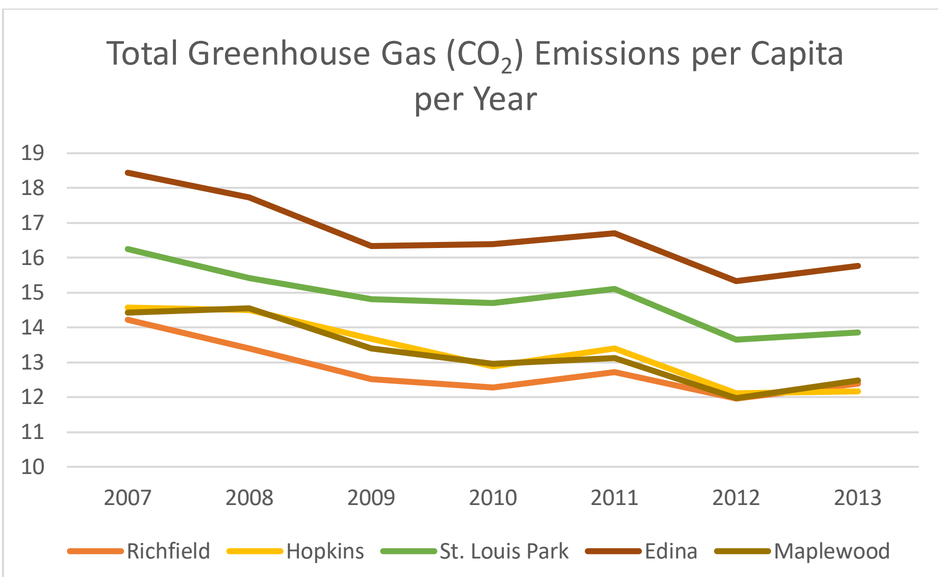


Hopkins Waste per Household per Day, in Pounds
18
16
14
12
10
8
6
4
2
0
9.58
8.21
7.53
7.66
7.4
7.38
7.18
5.89
5.75
5.51
5.64
5.66
5.76
5.88
2007
2008
2009
2010
2011
2012
2013
Disposed
Recycled

Greenhouse Gas Emissions

Hopkins has the lowest total greenhouse gas emissions among neighboring and comparable cities. This holds for all categories considered: energy, waste, travel, and other sources. However, Hopkins has comparable emissions per capita per year compared to neighboring and comparable communities. The City's lower emissions are likely a result of having a smaller population than other cities used in this comparison.





Journey to Work

Hopkins has the lowest percentage of commuters driving alone to work and the highest percentage of carpooling among neighboring and comparable cities. This shift from solo to shared driving is the most noticeable trend in Hopkins for available data years. There has been a small increase in the number of residents working from home between 1990 and 2015. Hopkins is similar to compared communities for all other modes of transportation considered.