

# **Sustainability and Resiliency Committee Meeting**

August 13, 2024 – 3:00pm  
City Commission Chambers

## **Agenda**

- 1. Roll Call (5 min.)**
- 2. Approval of Agenda (5 min.)**
- 3. Approval of Minutes from June 11, 2024, Meeting (5 min.)**
- 4. Prairie St. Johns Building Demolition – Presentation on Recycling and Reuse Efforts (30 min.) (Matthew Sheppard – PSJ, Director of Facilities)**
- 5. Fargo Sustainability Roadmap – Presentation and Next Steps Discussion (30 min.) (Seth Strongin – HDR, Building Decarbonization Planning Director)**
- 6. Public Comment (10 min.)**  
2.5 minutes per speaker
- 7. Next Meeting (5 min.)**
  - October 8, 2024 (tentative)

**Sustainability and Resiliency Committee**  
**Fargo City Commission Chambers**  
**June 11, 2024, 3:00 p.m.**

**Present**

John Strand (chair), Fargo City Commissioner  
Tim Mahoney, Fargo Mayor  
Bruce Grubb, Fargo City Administration  
Maegin Elshaug, Fargo Department of Planning and Development  
Brenda Derrig, Assistant Fargo City Administrator  
Ben Dow, Director of Public Works for the City of Fargo  
Shawn Ouradnik, City of Fargo Inspections Director  
Julie Bommelman, City of Fargo Transit Director  
Abhijna Kavasseri, Youth Initiative Representative  
Mike Williams, At-Large Member of the Public  
Zoe Absey, At-Large Member of the Public  
Casey Steele, At-Large Member of the Public  
Greta Gramig, At-Large Member of the Public  
Dave Bietz, Fargo Park District Representative (Ex-officio)

**Absent**

James Hand, Fargo School District Representative (Ex-officio)  
Becki Majerus, Director of Facilities Management for the City of Fargo  
Jennifer Sweatman, At-Large Member of the Public  
Shawn Paschke, Xcel Energy Representative (Ex-officio)  
Chad Brousseau, Cass County Electric Cooperative Representative (Ex-officio)

Mr. Strand called the meeting to order.

**Approve Agenda:**

Mr. Dow moved, second by Ms. Derrig that the agenda be approved. There was unanimous approval.

**Approve Minutes:**

Mr. Grubb moved, second by Ms. Absey that the minutes from the April 9, 2024 meeting be approved. There was unanimous approval.

**SRC Bus Wrap Update:**

A video was shown featured featuring Kaylee Trana and her winning design for the bus wrap, and a second video was shown on how the wrap was installed on the bus. Ms. Kavasseri said it was fun working with Planning and Transit staff as well as the finalists for the contest. She said this would be her last meeting with the SRC as she has graduated from high school and will be attending Princeton University in the fall.

**Clean-Up Week Report**

Solid Waste Utility Director Scott Olson said Clean-Up Week is a collaboration between Solid Waste, Public Works and private contractors. This year, he said, 1,520 tons of material was collected plus 33 tons of tires and 140 tons of metal. He said the tonnage of trash collected over the last 5 years has decreased, which he attributes to more recycling and residents bringing items to the transfer station throughout the year rather than waiting for Clean-up Week. There are several general rules for Clean-Up

Week, he said, including electronics, stains, paints and other household hazardous waste should not be set out as well as no lumber, concrete, brush and tires. Other general rules, he said, include separating items to make collection easier and there is a limit of two appliances per address. Each year there are challenges during Clean-Up Week, he stated, including excessive piles, which require additional resources, non-sorted debris piles and piles placed on the curb too early, which become weather-impacted. He said excessive piles are a challenge and homeowners with excessive piles in the future may be charged a fee. This year, he said, there was one address where it took seven truckloads to clear a pile. A video highlighting the transfer station at the landfill was shown and Recycling Supervisor Jen Pickett said any resident may bring items to the transfer station for disposal and there is no fee. Mr. Olson said some of the financial information for Clean-Up Week costs include \$75,000.00 for private contractors, \$53,000.00 for overtime, \$8,600.00 for fuel and \$10,000.00 for tire recycling. He said the City was paid about \$6,000.00 for items taken for metal recycling; therefore, the total financial impact to the City for Clean-Up Week this year was about \$152,000.00.

In response to a question from Mayor Mahoney asking what is the difference between Fargo and West Fargo Clean-up Weeks, Ms. Pickett said West Fargo pays Waste Management for garbage collection vs. the City of Fargo, which operates its own Solid Waste division.

In response to a question from Mr. Strand asking if recycling is profitable, Ms. Pickett said if residents sort their recycling themselves at any of the recycling sites around town, that is profitable; however, curbside recycling is not profitable due to the fact that the City has to pay people to sort the recycling and the City also pays companies to take the sorted material.

In response to a question from Ms. Gramig asking how messaging is delivered to citizens about Clean-up Week and recycling, Mr. Olson said outreach happens with flyers, press releases and through the website.

### LED Lighting Effects

Kristina Klinkhammer gave a presentation on LED lighting and its effects on human biology. She said LED light is a non-native electro magnetic frequency, which does not occur in nature and is a narrow frequency band of radiation, which is alien to humans. She said LED bulbs flicker 100 to 120 times per second and flicker rates can have negative health effects, including seizures, headaches, fatigue, blurred vision, eye strain and reduced visual performance. LED lights shut down melatonin production, she said, and electromagnetic radiation is emitted, which is disruptive to circadian biology. LEDs also induce metabolic stress, she said, and damage the cellular function of the retina, causing macular degeneration and cataracts.

In response to a question from Mr. Strand asking what is the answer, Ms. Klinkhammer said the City should stay with incandescent bulbs and if that is not possible, remove any LED bulbs that are 3000k or higher. She said if that is not possible, use diffusers. Many cities have stopped installing LEDs, she said, due to citizen response.

### Public Comments

James Drew spoke about the health and safety of LED lights and that more public awareness is needed.

### Next Meeting:

The tentative date for the next meeting will be August 13, 2024.

The meeting adjourned at 3:50 o'clock p.m.



City of Fargo  
Sustainability and Resilience Committee  
Sustainability Roadmap Narrative  
August 13, 2024

HDR is honored to have partnered with the City of Fargo (City) to conduct sustainability and resilience planning over the past year, including developing the Fargo Sustainability Roadmap (Roadmap), which is appended to this narrative. This document is meant to guide the reader through the Roadmap.

## Roadmap Organizational Structure

The Roadmap is intended to provide step-by-step guidance on the actions that the City of Fargo can take, across a range of city operations to achieve increasingly more sustainable outcomes through 2050. There are two primary organizing principles of the Roadmap:

1. Categorizing city operations by **Type**, including Infrastructure and Facilities, and then **Subtype**.
2. Recommendations are sequential over time and organized into timeframes, including **Near-Term** (2024-2030), **Mid-Term** (2030-2040) and **Long-Term** (2040-2050) implementation timeframes.
3. Recommended **Actions** facilitate the achievement of **Targets**.

This narrative is oriented to the type and subtype of city operation, explaining all of the steps over time for improving sustainability for that subtype, before going on to the next subtype.

## 1 Infrastructure

Much of the city's operations are focused on providing infrastructure for public use and the services citizens rely on to keep their communities functioning. There are opportunities to achieve sustainable outcomes across all of these areas, including water, waste, transportation and energy.

### 1.1 Water

The City provides drinking water and manages the wastewater for Fargo. As a finite resource that is vital to the City and its residents, the sustainability of Fargo's water system is essential. The Near-Term steps on the Roadmap include:

- Alternative Water Study: Review and consider options presented in previous studies to understand alternative supplies of water, including reclaiming treated wastewater for non-potable uses, rainwater harvested for irrigation, efficiency improvements in the water system, and water supply reliability projects, such as the Red River Valley Water Supply Project.



The Alternative Water Studies can support the development of strategies that will help achieve the Near Term target of meeting 100% of irrigation needs through alternative water supplies, the Medium Term target of meeting 100% of indoor plumbing fixture needs through alternative water supplies and the Long Term target of Optimized Water Systems.

## 1.2 Waste

The solid waste stream of Fargo also presents an opportunity to reduce emissions and improve sustainability performance. Previous estimates suggest that the emissions avoided as a result of the City's recycling and waste diversion programs is equivalent to the electricity used by 3,200 homes. The Near-Term steps on the Roadmap include:

- **Material Flow and Value Analysis:** Review and consider options presented in previous studies of the materials that comprise the solid waste stream, and the costs and resource values associated with managing the waste stream. Better understanding the waste stream will enable the City to identify opportunities to promote a circular economy through material reuse, and to minimize costs and maximize revenue generation potential through efficient solid waste management.

The Material Flow and Value Analysis can support the development of strategies that will get the City to the Near Term target of 100% diversion of organic waste from the landfill, the Medium Term target of 100% diversion of construction and demolition waste, and, ultimately, the Long Term target of 100% diversion of solid waste from the landfill.

## 1.3 Transit

Transportation is an integral part of the City's sustainability and emission reduction goals. Both the MATBUS public transit system, as well as the fleet of city-owned vehicles present opportunities to improve sustainable outcomes. The Near-Term steps on the Roadmap include:

- **Zero Emission Mobility Study:** The City can consider conducting a Zero Emission Mobility study as one approach to identifying the best mobility options for Fargo, the potential costs and timeline and the considerations that go into an implementation strategy. MATBUS vehicles may need to be transitioned over time to use different technologies, which may also require transitioning operations and maintenance infrastructure. Additional transportation modes and solutions meeting the community's needs may also be considered.
- **Zero Emission Mobility Implementation:** Based on the results of the Zero Emission Mobility study, consider developing a strategic plan to implement the zero emission mobility recommendations.
- **Fleet Conversion Study:** The City of Fargo's fleet of city-owned vehicles is a source of emissions and contributes to the City's overall sustainability performance. Converting the fleet to have zero emissions may involve adjusting and possibly accelerating the existing vehicle replacement plan, as well as considerations around infrastructure needs, such as electric vehicle chargers. Consider studying an optimal fleet conversion strategy and



timeline, including an assessment of the supporting infrastructure for a zero emissions fleet of city-owned vehicles.

- Class 3-5 Fleet Conversion Implementation: As vehicles come up for replacement, consider beginning the conversion to a zero emission vehicle fleet, starting with medium duty vehicles (i.e., Classes 3 through 5).

Addressing the sustainability in transportation takes longer than most other areas, due to the breadth of what transportation includes and the potential scale of effort and cost to implement. The city could consider converting its vehicle fleet to zero emissions over the next 15+ years as a Mid Term target. That will require the following Mid Term actions:

- Class 6-7 Fleet Conversion Implementation: Consider continuing replacing vehicles that are due for replacement with zero emission vehicles, including heavy duty vehicles (i.e., Classes 6 and 7).

Addressing commuting related emissions is a Long Term effort, with a target of zero commuting emissions by 2050. Mid Term and Long Term actions include:

- Alternative Fuel Workforce Development: As new zero emission vehicles get incorporated into the city-owned fleet, as well as MATBUS, there are workforce development opportunities for people with skills in maintaining alternative fuel and zero emission vehicles.
- Commuter Incentive Program: Consider collecting data on patterns and preferences for commuting and transit use from the community, with the goal of using the data to develop programs to incentivize commuters to use zero emission transit.

Funding is critical to taking actions that can contribute toward sustainable outcomes. Numerous federal grant and funding programs have been identified, in green on the Roadmap, that the City can consider applying to. Specific opportunities include the CFI grant for medium-duty fleet conversion, as well as the federal NEVI program, an environmental justice grant and a federal clean bus grant that can support zero emissions mobility.

## 1.4 Energy

The energy that powers Fargo plays a critical role in the reduction of city's emissions and the pursuit of sustainable outcomes. The Near-Term steps on the Roadmap include:

- Investigate LSRE PPA: Consider coordinating with Xcel Energy to determine the options for purchasing zero carbon electricity for City facilities, through a Power Purchase Agreement (PPA).
- Investigate onsite energy resilience: Generating and storing energy onsite can improve the reliability of the power used to operate a facility, enhancing resilience to natural disasters and transmission and distribution failures. Producing zero carbon electricity onsite, including through the use of solar photovoltaic panels, will also help reduce emissions and achieve sustainability goals. Consider conducting solar PV and battery



energy storage system feasibility studies to determine the most effective sites for installation.

- Emission-free generation: Based on the results of the PPA and onsite energy resilience investigations, consider implementing whichever strategy makes the most sense for the City.

The Near Term target is to use 80% emission-free electricity, with a Medium Term target of 100% emission free, or net zero energy. The Long Term target is to produce more zero carbon electricity than is needed, providing back clean electricity and achieving net positive energy.

## 2 Facilities

The City's facilities, including the portfolio of facilities currently in use, as well as facilities that the City will develop in the future are another area where sustainable outcomes are possible through the additional actions continuing through 2050 .

### 2.1 Existing

The City's existing facilities represent a major opportunity for reducing emissions and improving the City's sustainability performance. The Near-Term steps on the Roadmap include:

- Energy monitoring and benchmarking: Tracking meter-level energy usage data for electricity and natural gas from the past 24 months using the US EPA Energy Star Portfolio Manager tool will provide a benchmark for the City to compare the performance of its facilities to similar facilities nationwide and a starting point from which the City can manage the energy and carbon performance of its facilities moving forward.
- Retro-commissioning (RCx): RCx is an in-depth process that involves going onsite and assessing a facility's ongoing operational performance to identify opportunities for improving energy efficiency, typically through gathering system-level energy usage data.
- Design Standards for Renovation: Consider developing Sustainable Renovation standards for all newly designed and built City facilities. The standards should cover major building systems, including architecture, envelope, HVAC, lighting, plumbing fixtures, metering and control systems.
- Procurement for Renovation: Consider developing Sustainable Renovation Procurement Standards to green the retrofit and renovation supply chain, including developing life cycle cost and payback analysis criteria, improvements vs. replacement criteria, and vendor requirements.
- Emission reduction strategies: Consider developing prototype pathways for reducing emissions, based on facility typology. Emission reduction pathway will include recommendations on the optimal mix of energy efficiency, fuel switching/electrification and sourcing zero emission electricity projects, depending on the typical systems and equipment for different facility types.

The Mid Term and Long Term steps are to consider implementing the Emission reduction strategies that result from Near Term steps, moving toward the Medium Term target of 100%



all-electric facilities, that are powered by onsite solar PV and BESS and/or through power purchase agreements with Xcel Energy. The Long Term target is zero emission facilities with maximized efficiency.

Identifying funding to support actions related to both Facilities and Energy could facilitate sustainable outcomes. The City did receive funding through the Energy Efficiency and Conservation Block Grant that was awarded to the state of North Dakota, which has already been allocated toward sustainability projects. At the time the Roadmap was developed, there was also hope that US EPA Community Pollution Reduction Grant (CPRG) funding would be available to Fargo, to begin implementation of these areas of the Roadmap. Unfortunately, Fargo did not receive a (CPRG) grant.

## 2.2 New

The City will eventually need to develop new facilities, which can be addressed in this Roadmap by establishing standards, both for the design and operational performance and procurement.

- Design and Performance Standards: Develop Sustainable Design and Performance standards for all newly designed and built City facilities. The standards should cover major building systems, including architecture, envelope, HVAC, lighting, plumbing fixtures, metering and control systems.
- Procurement Standards: Develop Sustainable Procurement Standards to green the supply chain, including developing life cycle cost and payback analysis criteria, improvements vs. replacement criteria, and vendor requirements.



