



Mayor Dave Kleis  
Mississippi River  
Forum

March 18, 2016

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# The Mississippi River:

- Largest Agricultural
- Trade footprint
- Largest Navigable system
- Sustains most agriculturally productive zone



# The Mississippi River:

- \$400 billion in Annual Revenue
- 1.3 million US Jobs
- Top 3 economies are
- Manufacturing
- Tourism
- Agriculture
- Largest USDA Critical Conservation Area in US



# The Mississippi River:

- 40% of all US agricultural output
- 60% of US grain output
- Makes possible United States' only trade surplus
- Almost a half trillion dollars in gross municipal product



# Mississippi River Cities & Towns Initiative:

- 68 Mayor-Lead Municipalities
- 2500 Miles of Waterway
- 10 States
- 1 River



# Recent Climate Impacts:

- Hurricane Katrina
- Hurricane Isaac
- 100, 200, 500-Year Floods
- 50-year Drought



# Mayors Representing the Mississippi River



# Conference in Paris



# What's at stake?

- Over 35% of world's traditional cropland is in river basins
- World's river basins are being impacted by climate change
- Healthy rivers equals a sustainable food supply
- Healthy rivers equals access to fresh clean drinking water



# The World's Most Important Rivers



# International River Basin Agreement to Mitigate Climate Risk by Achieving Food and Water Security

Protect surface and ground  
waters to ensure food  
security and access to  
drinking water.



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**PARIS2015**  
UN CLIMATE CHANGE CONFERENCE  
COP21·CMP11



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# Sharing Best Practices

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**C40**  
CITIES **FORUM**  
PARIS 2015



# Sharing Best Practices





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What is  
St. Cloud  
Doing?

# Definition of Sustainability

“Meeting the needs of the present without compromising the ability of future generations to meet their needs.”



# Community Based Process

- Reviewed Background Information
- Web-Based Existing Practices Survey
- Education Sessions: Sustainability and The Natural Step
- Engagement Sessions: Community Vision and Action
- Updated Goals and Vision
- Public Input Meetings

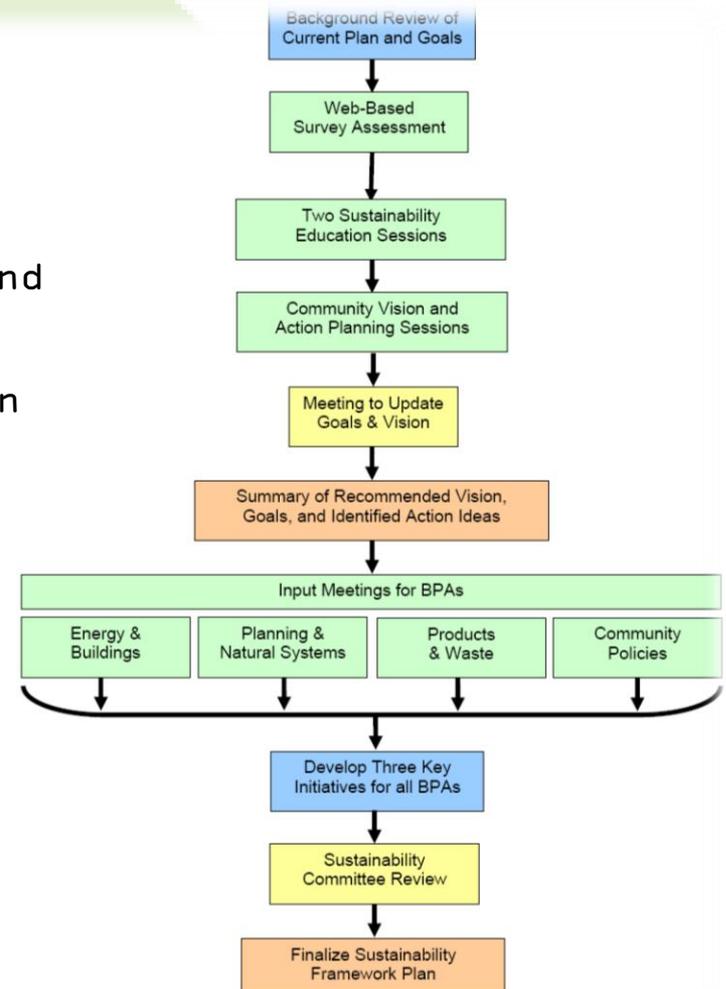
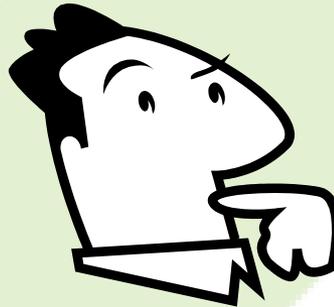


Figure 1. Flow Chart of Sustainability Framework Plan Development Process



# Growing Citizen Interest



# Community Tree Planting



Arbor Day Planting



Home of Our

Own



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# Forestry Programs



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**Dutch Elm Disease  
Border**



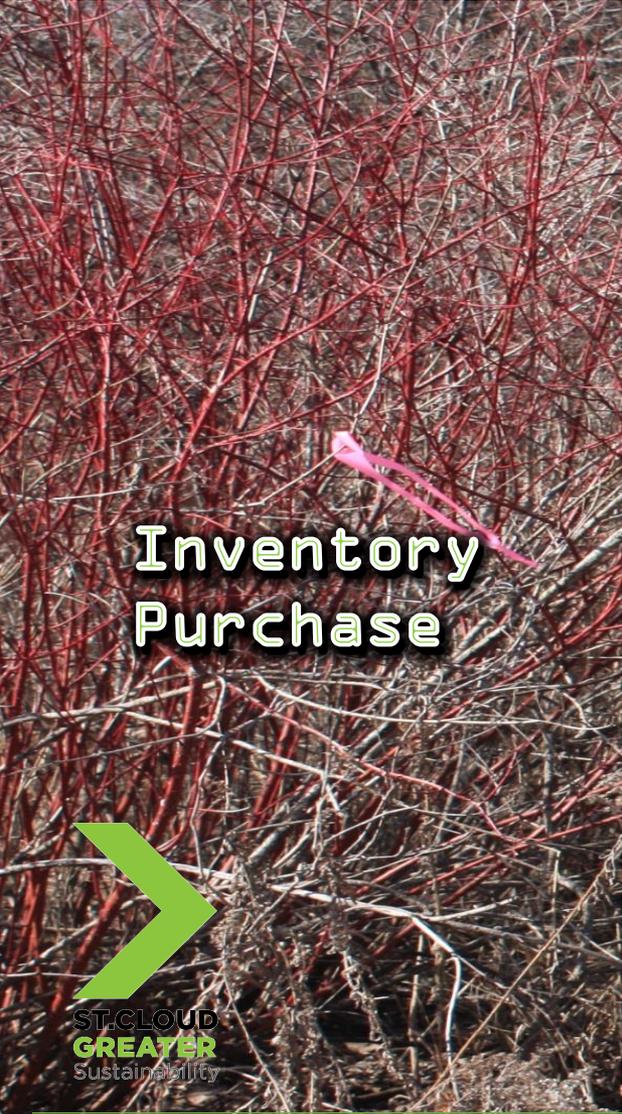
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# Adopt-A-Park Program



Grounds  
Facilities

# Environmental Protection



Inventory  
Purchase



Regulate

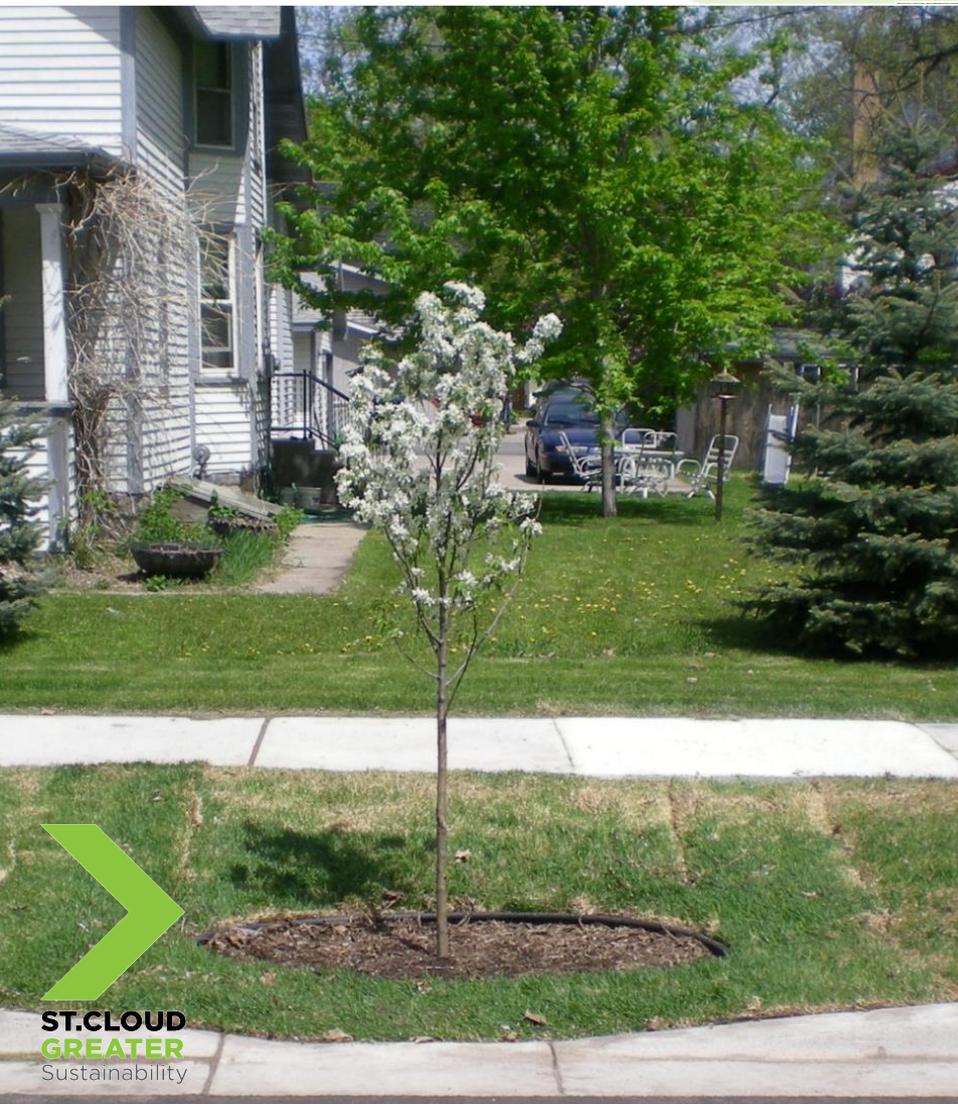


# Citizen Initiatives



Paint the Drain  
Rain Barrel  
Eco-Graffiti  
Promotions

# Rain Gardens



# Community Gardens



# Local Markets



# Healthy Lifestyle



# Nutrition



# Celebrate Sustainability



## *Sustainability!* **EXPO**

- 5th Annual  
5,000+ ATTENDEES  
275+ VENDORS
- City Listening Day

# Carbon Footprint Tracking

City's Electrical Carbon Footprint = 44 million pounds of CO<sub>2</sub> emissions

**In 2014** - The City of St. Cloud offset carbon emissions by **27 million pounds**

CARBON EQUIVALENTS (ANNUALLY)

- **2,578** passenger vehicles driven
- **1,117** homes energy use



Passenger Vehicles

**In 2017** - The City of St. Cloud will offset carbon emissions by **61 million pounds**

CARBON EQUIVALENTS (ANNUALLY)

- **5,825** passenger vehicles driven
- **2,525** homes energy use



homes' energy use for one year

# Multi-Modal Transit

Husky Fried Ride



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CNG



# City Plant Stock

City Greenhouse



City Nursery



# Waste Reduction

## Fun Facts about 2014 Recycling St. Cloud

### Biosolids Recycling!

SAVED?



in the virgin material and waste disposal industry, recycling creates 100 jobs!



3,611,780 lbs of Paper



103,660 lbs of Aluminum



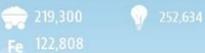
508,180 lbs of Plastic



1,538,820 lbs of Cardboard



175,440 lbs of Tin



### BY RECYCLING ST. CLOUD RESIDENTS SAVED :

In Paper, Aluminum, & Plastic

**14,100** = **705**  
Cubic Yards of Landfill = City Refuse Truck Loads



In Paper, Aluminum, Plastic & Cardboard

**36,476** = **58**  
Barrels of Oil = Train Cars of Oil



Recycling Saved

**10,149,589** kWh of electricity = Enough electricity to supply EVERY single family home for **24 days!**

- Trees
- kWh of Electricity
- Barrels of Oil
- Btu's of Energy
- Gallons of Water
- Fe Pounds of Iron
- Cubic Yards of Landfill
- Pounds of Coal
- Pounds of Air Pollution



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# Greenification = Clean Water

**BEFORE**

**AFTER**

Northeast St. Cloud

Stormwater  
Initiative



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Greenification = Clean Water



Northeast St. Cloud

Stormwater  
Initiative



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# Hydro Electricity

## Hydro Electricity

The HGF produces 38%  
more electricity than  
is required by all  
City facilities - **THE  
CITY IS A NET ENERGY**



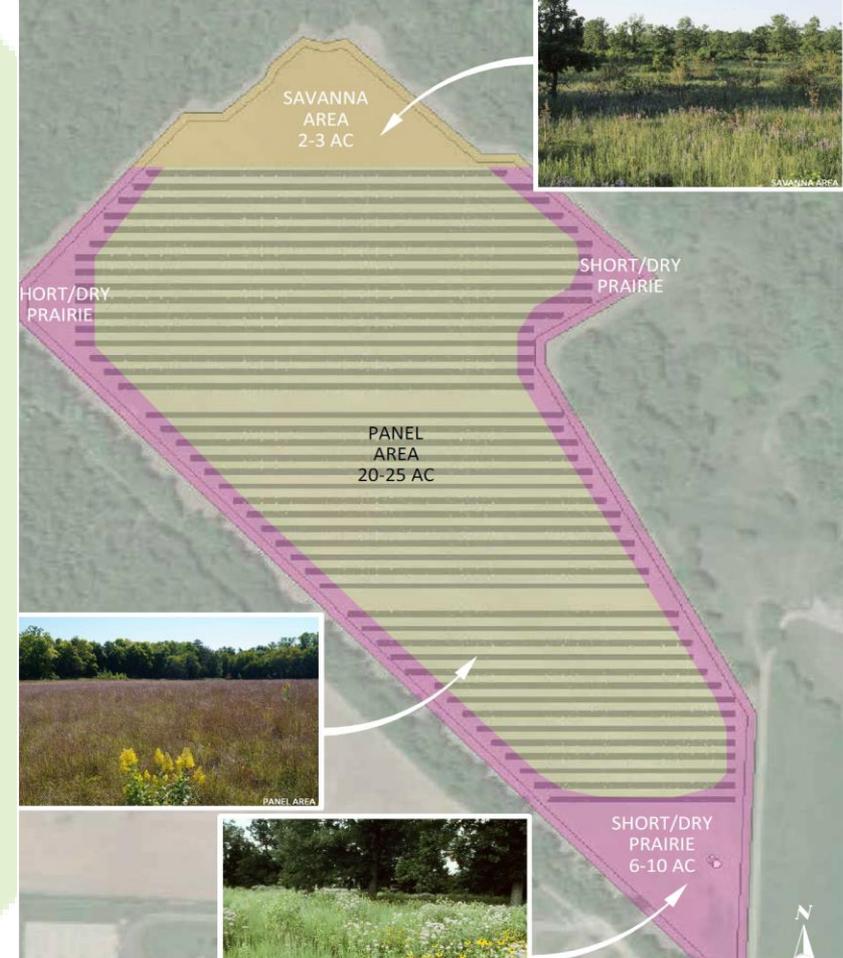
**DRANICER!**

# Geo-Thermal



# Solar Array

- By 2017 over **50%** of the electricity consumed by the City will be generated from solar power.
- Potential to save the city about **\$27 MILLION** over the next 25 years
- SunEdison will also make annual lease payments totaling **\$1.1 MILLION** over the next 25 years



# Street Light Replacement Project

Energy use in the street lighting system will be

**SIGNIFICANTLY REDUCED** while

providing infrastructure replacements and improvements.

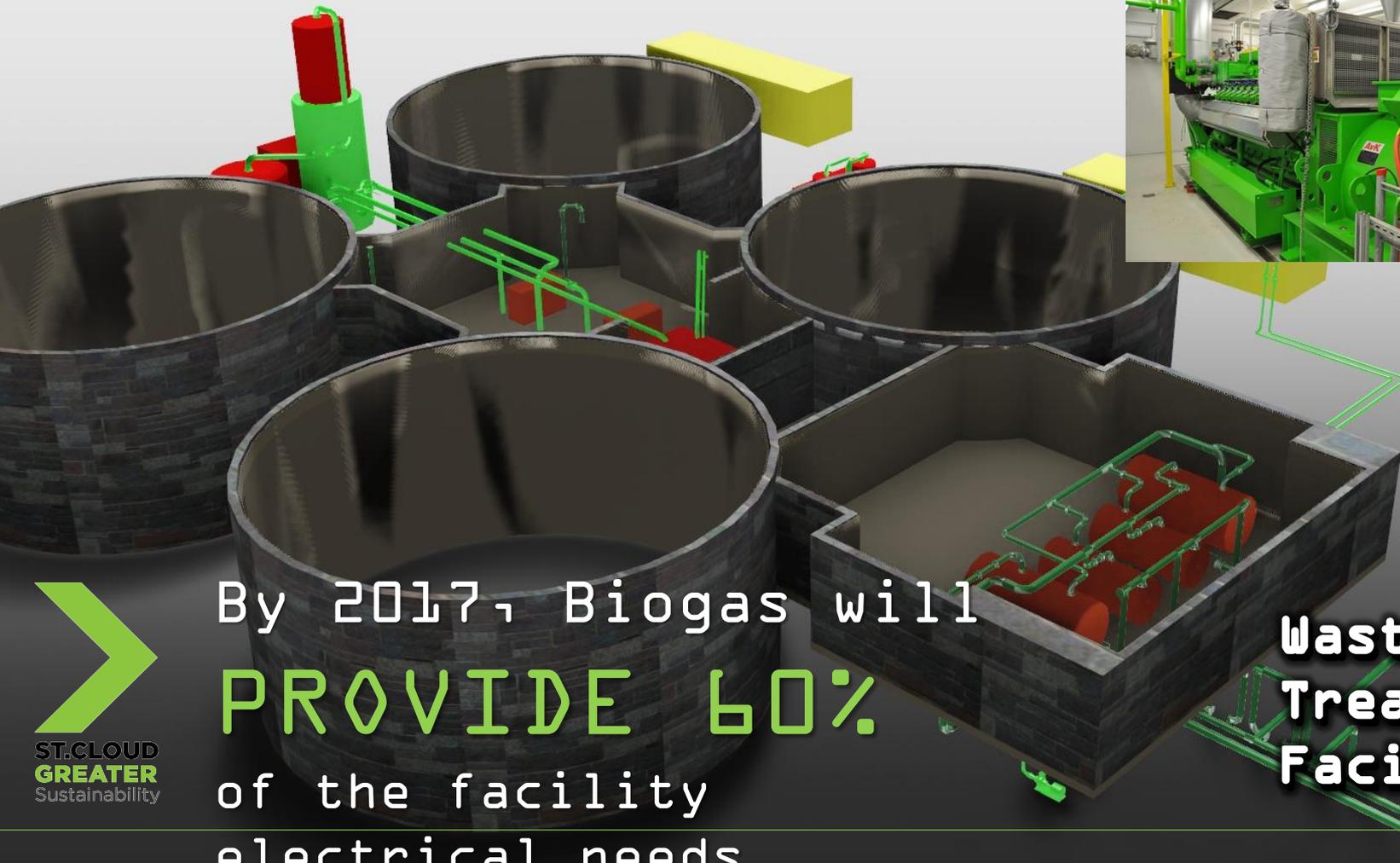


Smart Lighting



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# Biogas to Electricity



By 2017, Biogas will

**PROVIDE 60%**

of the facility  
electrical needs

**Wastewater  
Treatment  
Facility**



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# Energy Efficiency

## Wastewater Treatment Facility

Ongoing projects will result in a

**22% REDUCTION**

in electrical



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# Carbon Footprint Tracking

City's Electrical Carbon Footprint = 44 million pounds of CO<sub>2</sub> emissions

Current Sustainability Accomplishments	Current Offsets (pounds CO <sub>2</sub> )	Future Sustainability Initiatives	Future Offsets (pounds CO <sub>2</sub> )
HYDRO	61 million		
CURBSIDE RECYCLING	10 million		
		SOLAR	24 million
		BIOGAS	5 million
		STREET LIGHTS	3 million
		ENERGY EFFICIENCY PROJECTS	2 million





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Saint-  
Cloud  
France

# Saint-Cloud, France



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Rebuilding our  
**SISTER CITY**  
relationship.

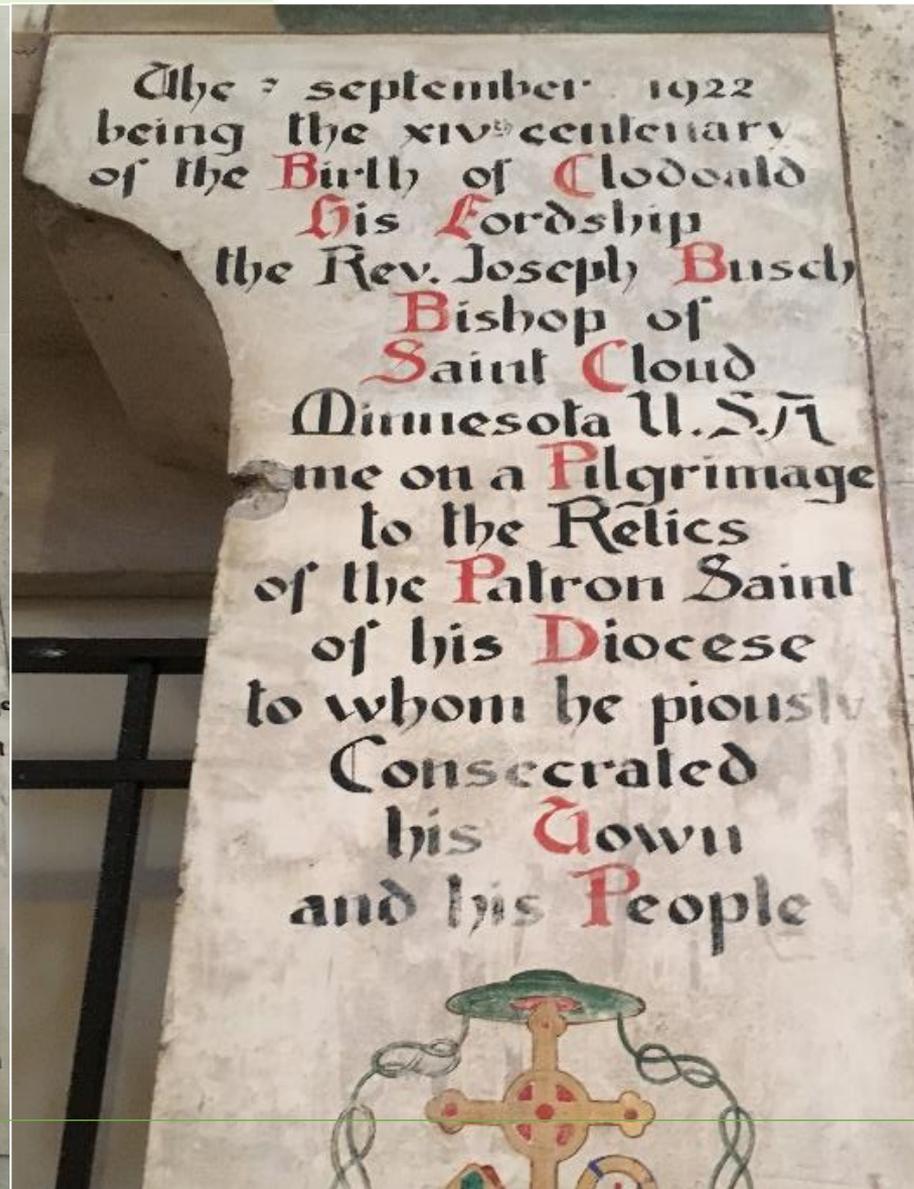
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Thank  
You

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