



CITY OF SIOUX FALLS
PUBLIC WORKS
Providing a Better Quality of Life for You!

Investing in our Wastewater System



**PLANNING
FOR THE
NEXT 20
YEARS**





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Presentation Agenda



A History of Reliable Service



About the Facility



About the Collection System



Master Planning Process



Master Planning Team



Master Plan Drivers



Current Facility



Future Facility



Master Plan
Recommended Improvements



Next Steps in 2018



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A History of Reliable Service

Over the past 35 years, the City constructed, maintained and updated the wastewater collection system and water reclamation facility that transports and treats our wastewater safely and effectively in a way that has kept rates affordable.



WATER RECLAMATION FACILITY

1990-2017
 Improvements to treatment, disinfection, storage, filtration, and capacity



COLLECTION SYSTEM

2007-2017
 Improvements to interceptors, force mains, outfalls, and manholes

1980

1990

2000

2010

2017

Incremental improvements over the past 35 years

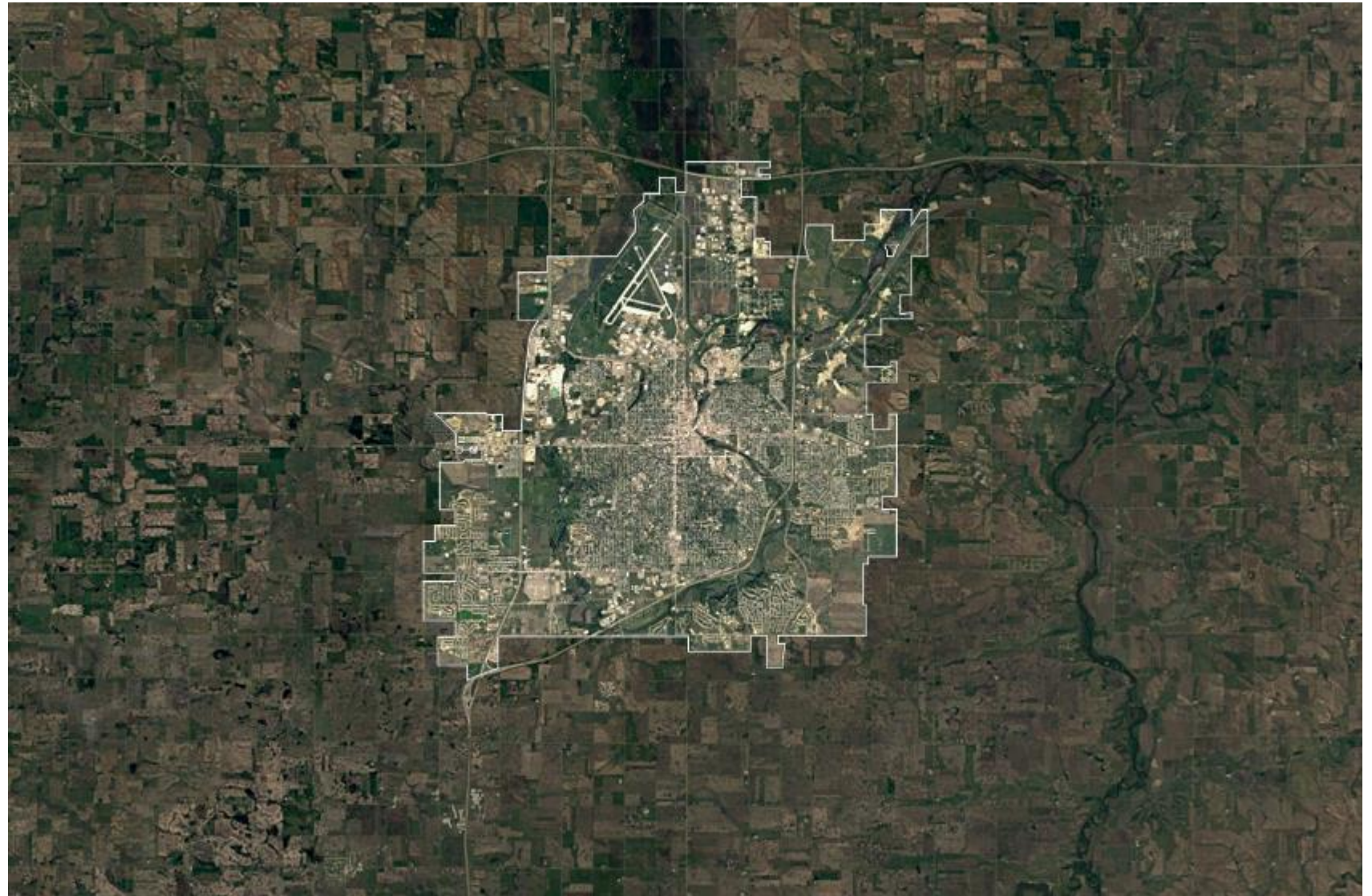
\$131M of investments in the last ten years

Federal dollars helped fund improvements



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Sioux Falls: 1984



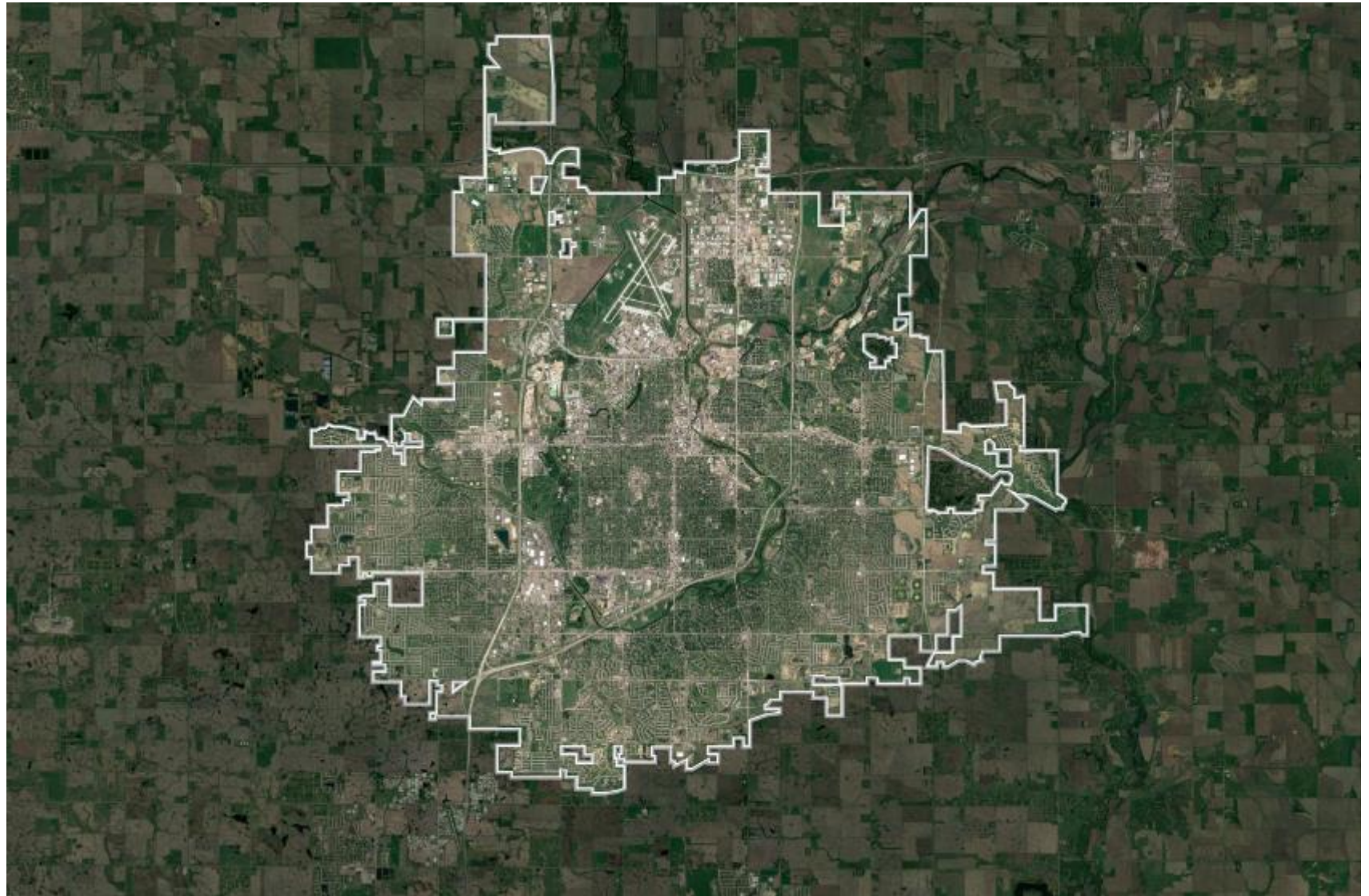
POPULATION: 88,000

SQUARE MILES: 43.11



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Sioux Falls: 2017



POPULATION: 183,200

SQUARE MILES: 78.21

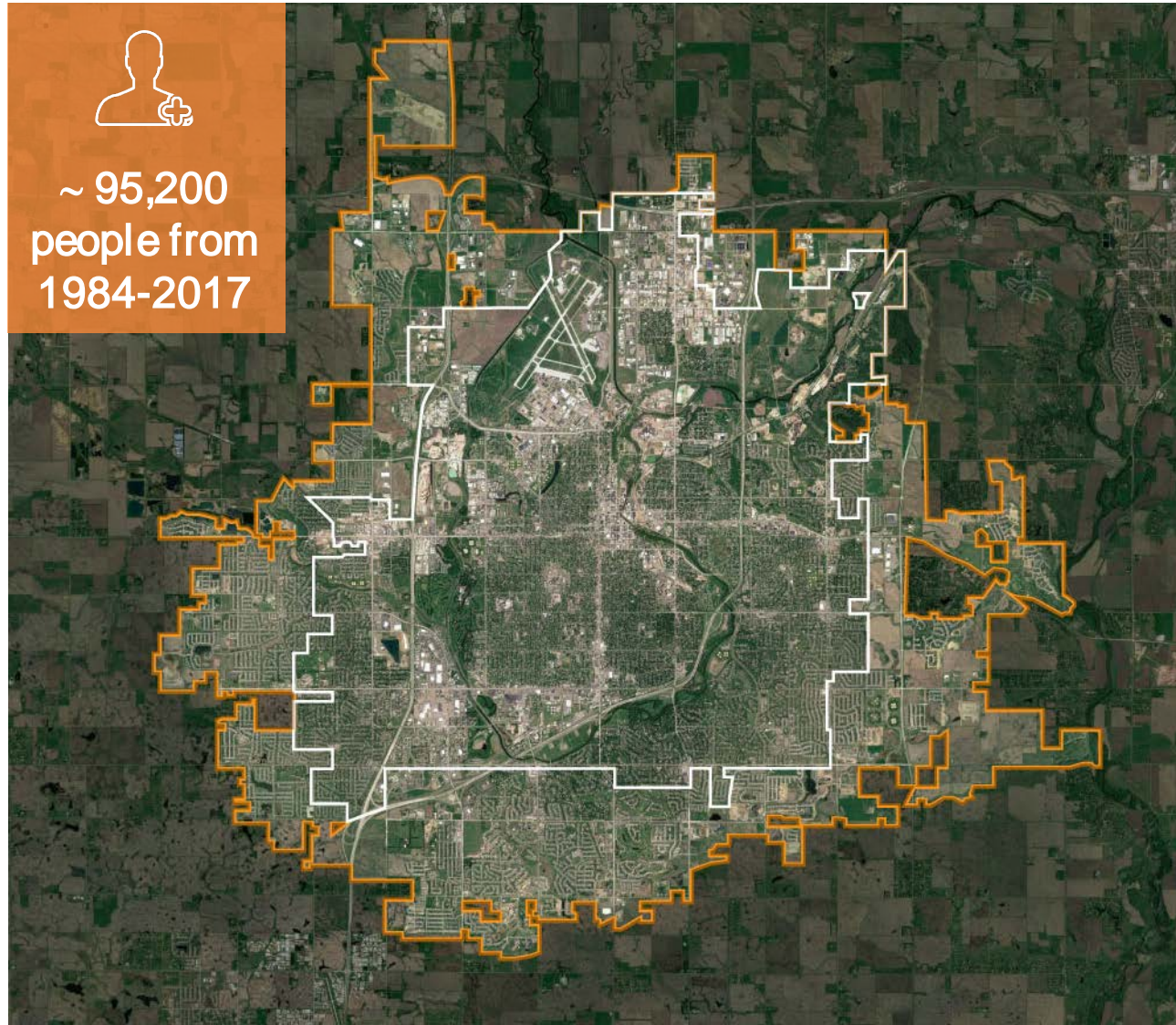


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Sioux Falls: 1984-2017



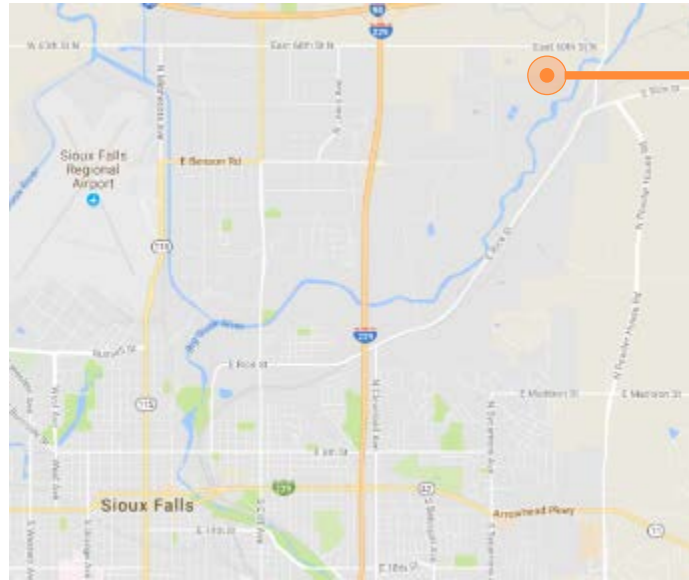
~ 95,200
people from
1984-2017





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About the Regional Treatment Facility



Constructed in
the early
1980s*



21 MGD
rated
capacity



Treats
17.2 MGD



Currently at
82% capacity

**75% Federal Grant Funded*

MGD = Million Gallons per Day



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About the Collection System



25 major basins
in 78 sq. mi.



846 miles of
sewer pipes



15,686
manholes



22 City-owned
lift stations



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Master Planning Process



24-month
planning
process



Developed &
peer-reviewed by
national firms



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Master Planning Team



Key City staff

- Mark Perry
- Paul Faris
- Mark Hierholzer
- Philip Greenwood
- Jeff Warkenthien
- Jesse Neyens
- Ryan Johnson
- Trent Lubbers
- Jeff Schmitt
- Mike Cooper
- Mark Cotter
- Debra Gaikowski
- Dean Borchardt
- Heather Hitterdal
- Shannon VerHey



HDR, Inc. team

- Roger Null
- Dan Graber
- DelRon Peters
- Mike Coleman
- Bryon Wood
- Jeff Christopherson
- JB Neethling
- Marie Pellegrin
- Bill Moran



Peer Review team

- Carollo Engineers



Regulatory team

- Department of Environment and Natural Resources



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Master Plan Drivers:

AGING INFRASTRUCTURE



Facility is 10 years
past design life



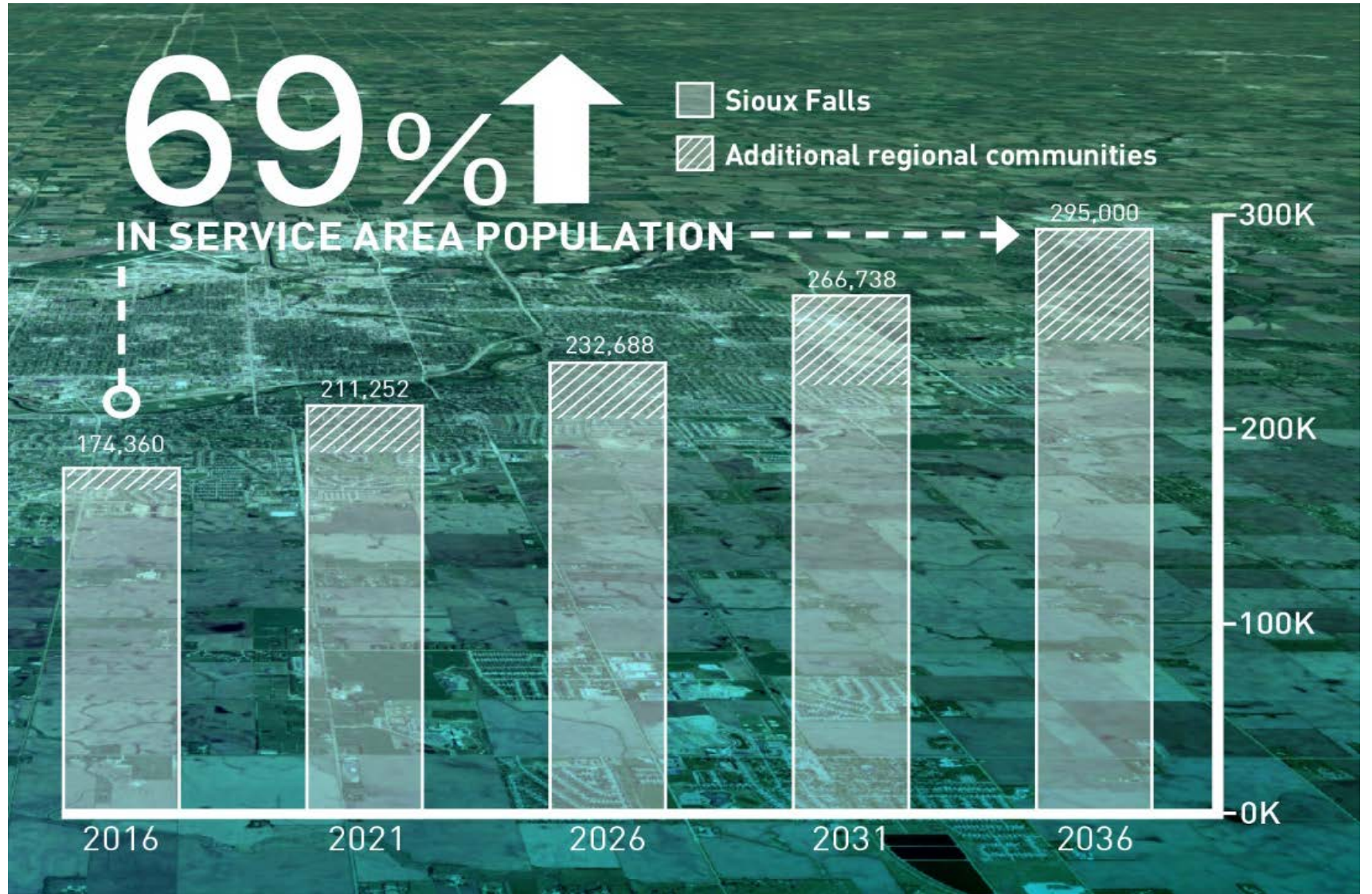
Lift station
rehabilitation





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Master Plan Drivers:
**CAPACITY FOR
REGIONAL
GROWTH**

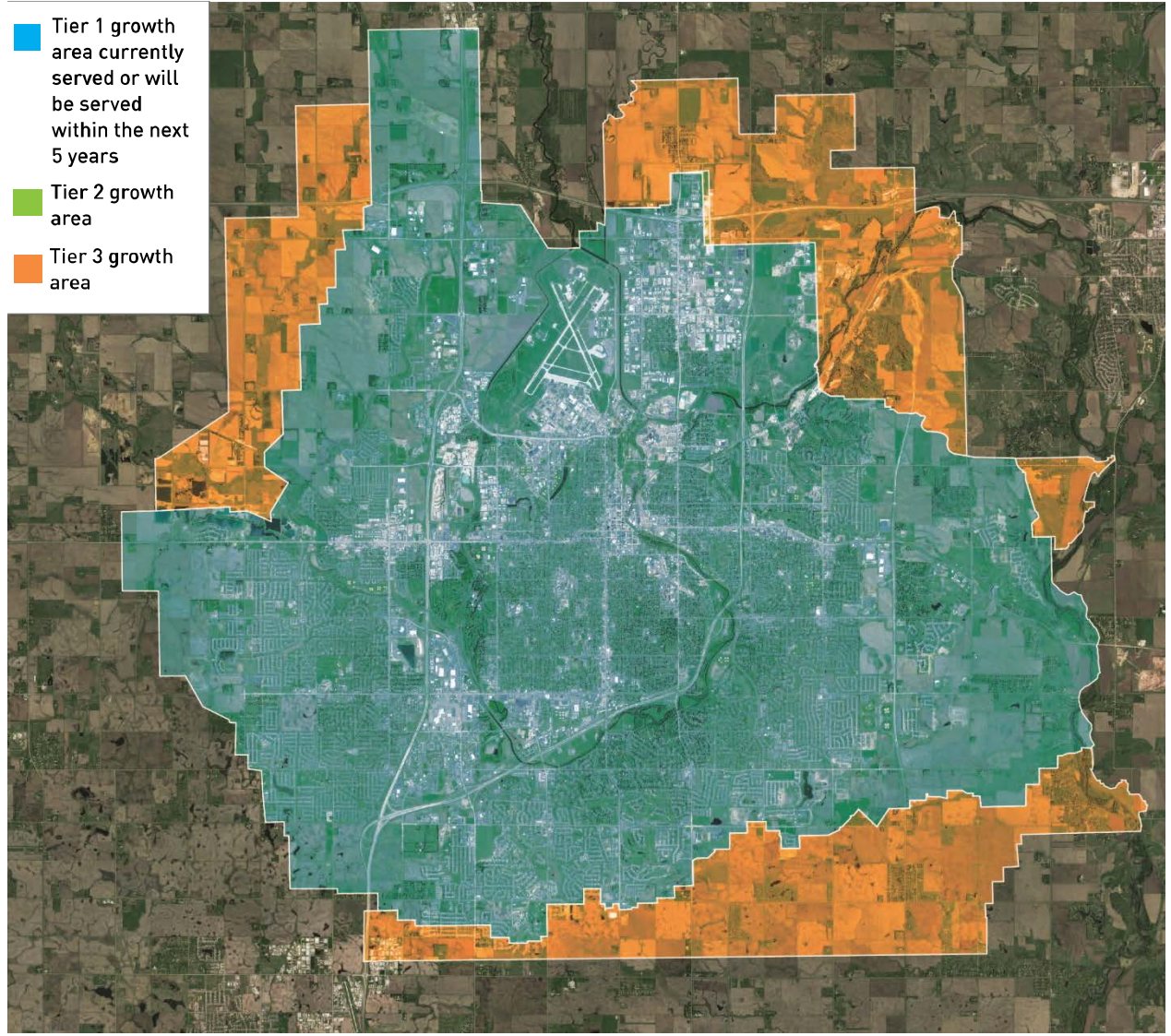




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Master Plan Drivers:

**GROWING
CUSTOMER BASE**



Potential Additional Regional Customers:

- Tea
- Harrisburg
- Hartford
- Wall Lake Sanitary District
- Lennox
- Crooks
- Baltic
- Garretson
- Valley Springs
- Corson
- Rowena
- Canton
- Worthing



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Master Plan Drivers:

FUTURE REGULATIONS



Big Sioux River water quality impacts everyone – Sioux Falls and downstream



Proactive planning for future regulations results in cost-effective investments



Regulations are becoming stricter nationwide



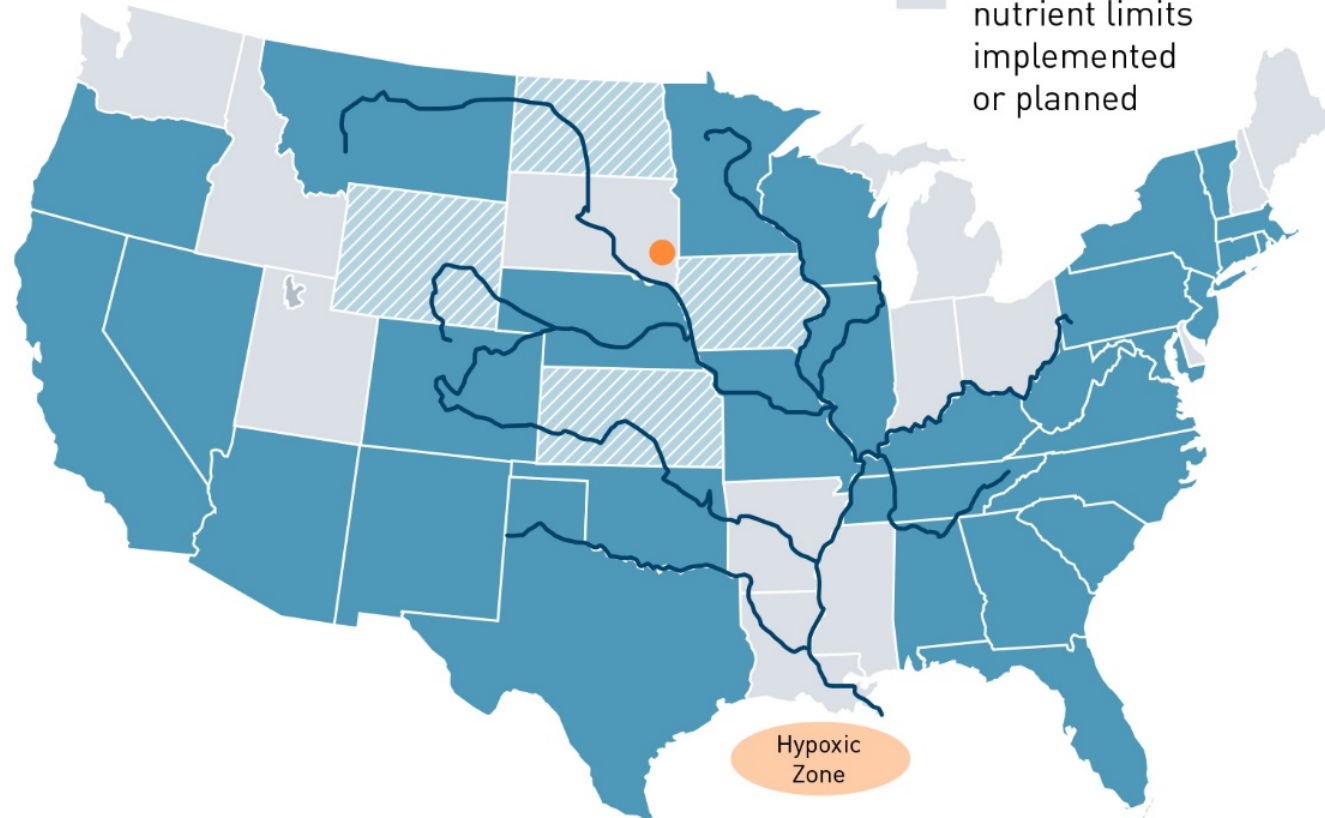
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Master Plan Drivers:

**FUTURE
REGULATIONS**

Changes in EPA regulations affect us

- States that have or will have some nutrient regulations in place by 2019
- States that are planning for nutrient reduction
- States that have no nutrient limits implemented or planned



Hypoxic Zone, or Dead Zone, is the area in the Gulf of Mexico devoid of life due to nutrient discharge from Mississippi River



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Current Facility



21 MGD

Annual average max



35 MGD

Peak max

MGD = Million Gallons per Day



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Future Facility



30.1 MGD

Annual average max



57 MGD

Peak max

MGD = Million Gallons per Day



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Master Plan Recommended Improvements



RECOMMENDED PHASE 1

- | | |
|---------------------------------------------------|-----------------------------------------------|
| 1A Treatment renovations | 1D Rehab preliminary/primary treatment |
| 1B Biosolids handling facility renovations | 1E New liquid treatment |
| 1C Lagoons repurposed for equalization | 1F New disinfection |



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Master Plan Recommended Improvements



2017 ————— 2025 ————— 2036

RECOMMENDED PHASE 1 | **RECOMMENDED PHASE 2**

1A Treatment renovations	1D Rehab preliminary/primary treatment	2A New primary treatment	2C New filtration
1B Biosolids handling facility renovations	1E New liquid treatment	2B New nutrient removal improvements	
1C Lagoons repurposed for equalization	1F New disinfection		



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Next Steps in 2018



Preliminary
Design



Identify Construction
Phasing



Determine 20-
Year Investment



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Thank you!

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