

Western Lake Superior Sanitary District

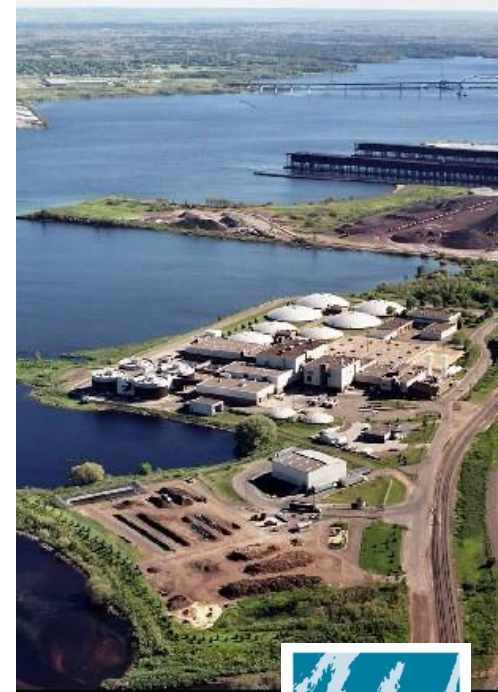


Clear Answers for Clean WaterSM

Legislative Water Commission
September 20, 2017

Western Lake Superior Sanitary District History

- Created by the Minnesota Legislature in 1971
 - River terribly polluted.
 - Existing facilities were inadequate
 - 18 separate discharges into St. Louis River.
- In 1974, Minnesota Legislature added full responsibility for solid waste management and planning
- Plant began operations in 1978
 - Treatment standards met on day one
- River dramatically improved within 2 years
- Today, the St. Louis River is an active walleye fishery and a resource for recreation, commerce and quality of life.





Board of Directors

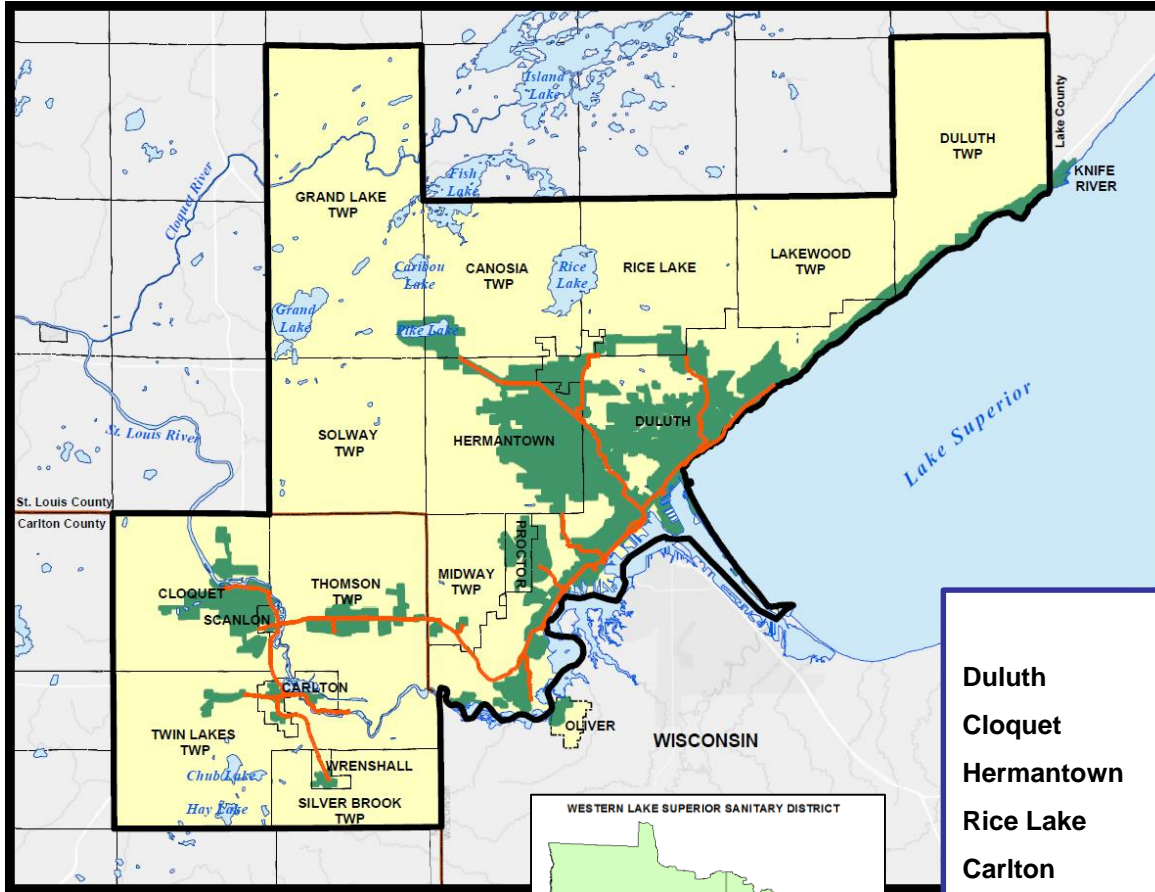


WLSSD is governed by a nine-member citizen board

Seven of nine votes are required for any action

- Four members appointed by the Mayor of Duluth and approved by City Council
- Three members appointed by the Cloquet City Council
- One elected by towns and cities in Carlton County outside of Cloquet
- One elected by towns and cities in St. Louis County outside of Duluth

A Comprehensive Solution to Regional Problems



- 13.9** Billion Gallons/Year
- 530** Square Miles
- 16** Communities
- 4** Large Industrial Customers

1 Regional Treatment Plant

WLSSD Serves

- | | |
|------------------|---------------------|
| Duluth | Oliver, WI |
| Cloquet | Midway Township |
| Hermantown | Twin Lakes Township |
| Rice Lake | Duluth/North Shore |
| Carlton | Jay Cooke |
| Wrenshall | |
| Proctor | |
| Scanlon | Sappi Fine Paper |
| Thomson Township | Verso Paper |
| Pike Lake | USG |
| Knife River | Specialty Minerals |



Clean Water...

- WLSSD's Treatment plant is designed to treat an average daily flow of 48 million gallons of wastewater a day
 - Treats 13.9 billion gallons each year
- 18 pumping stations move wastewater through a 78 mile network of interceptor sewers
- Reducing pollution
 - Industrial Pretreatment Program
 - Household hazardous waste collection and pollution prevention education



Solid Waste

- District was given solid waste responsibility by the MN legislature in 1974. Solid waste was used as a fuel to incinerate wastewater solids through the 1990s.
- WLSSD Solid Waste Transfer Station opened in 1999
- Other programs:
 - Organics Composting
 - Household Hazardous Waste and Clean Shop
 - Materials Recovery Center



A Hazardous Waste Disposal Option for Small Businesses



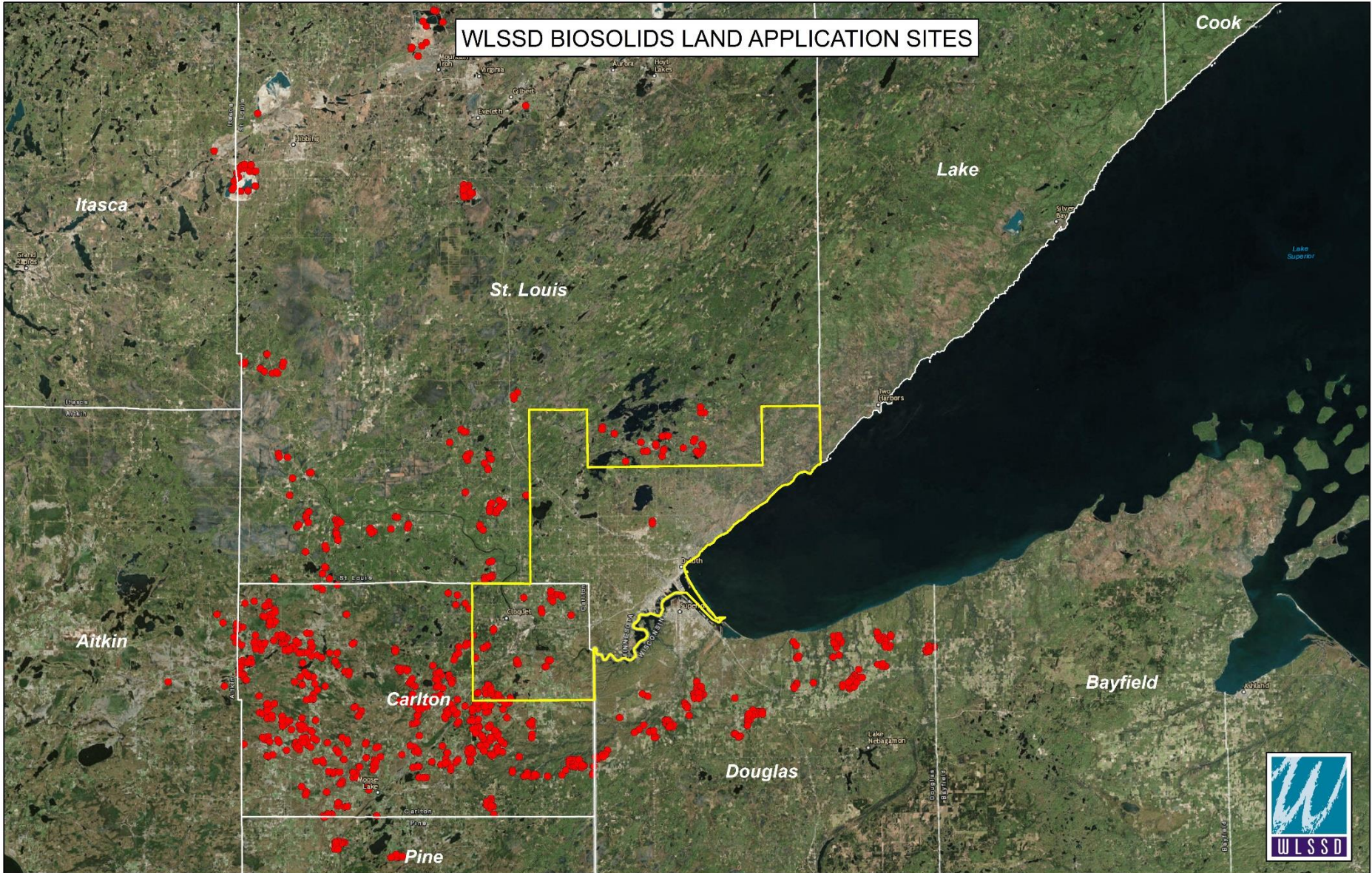


Biosolids Production and Land Application

- \$33 million production facility opened in 2001
- All WLSSD biosolids are applied by certified operators to local agricultural lands to produce feed crops and in mine land reclamation projects



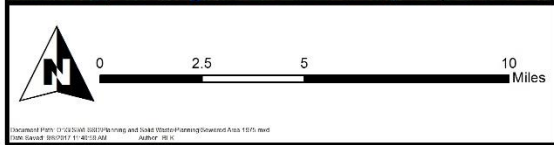
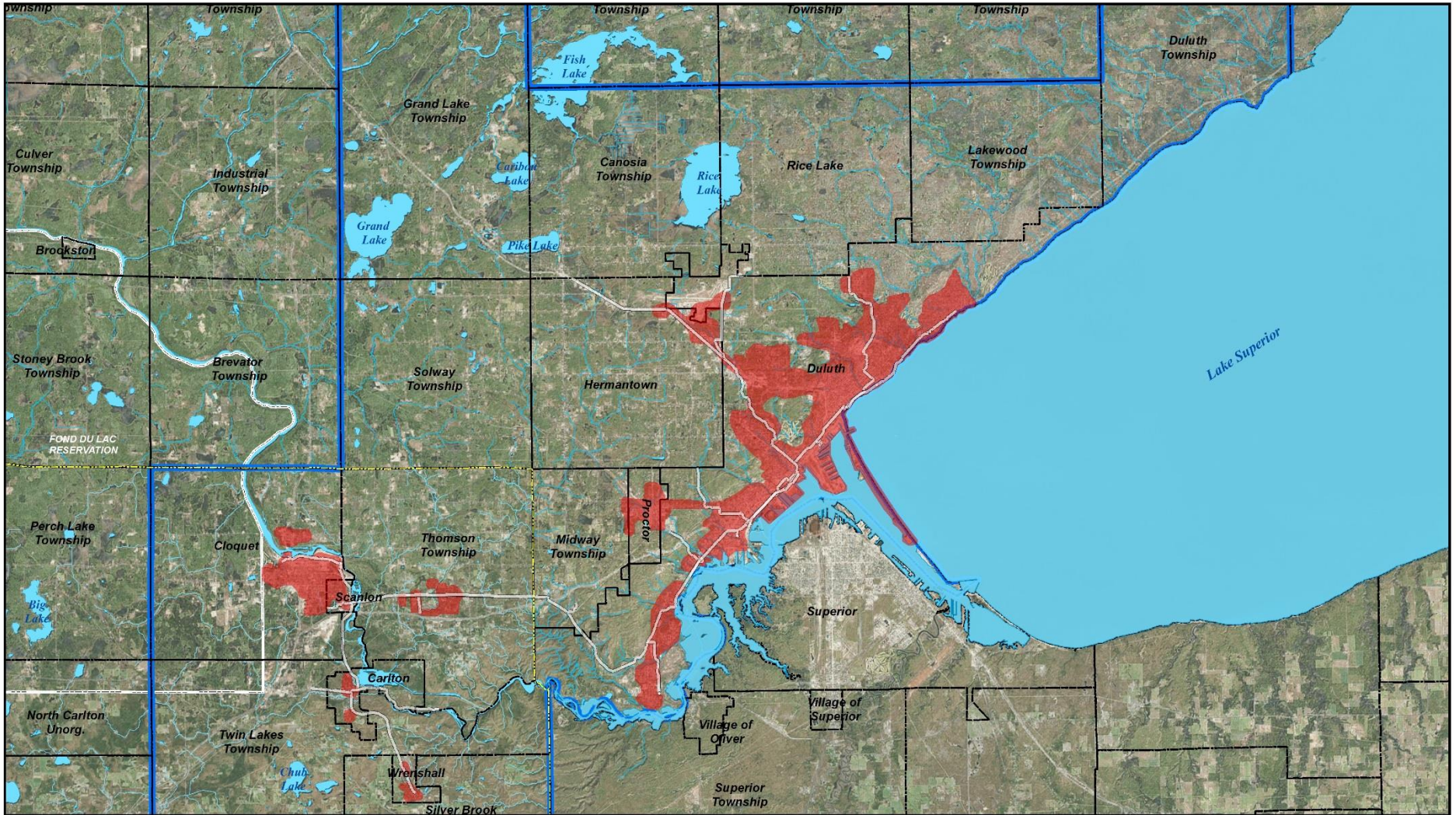
WLSSD BIOSOLIDS LAND APPLICATION SITES



The Next Generation of Power



Regionalization Opportunities and Challenges

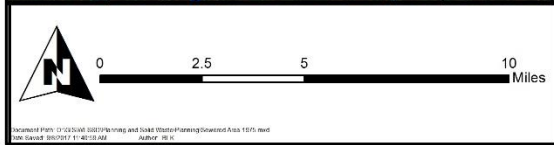
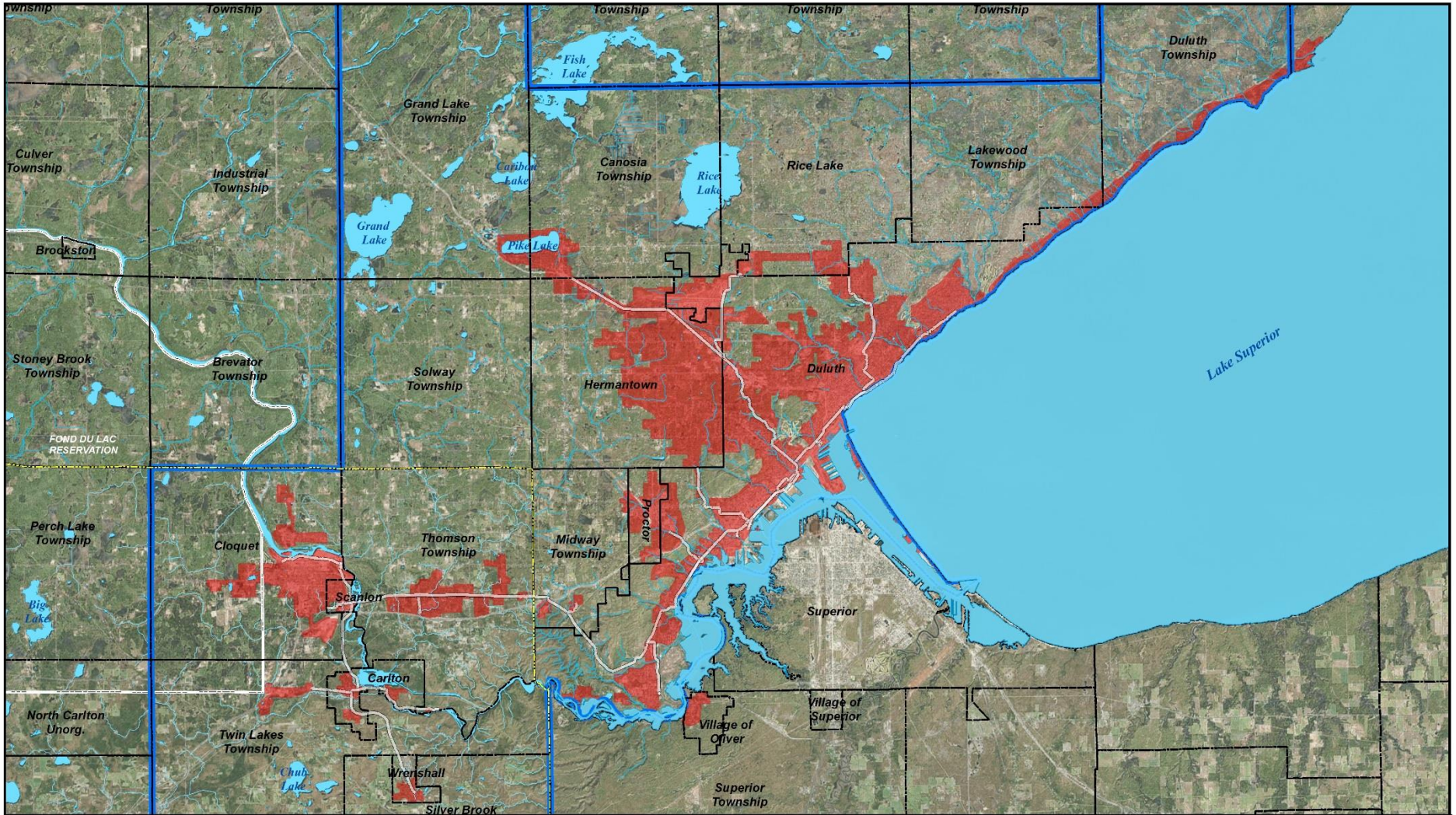


WLSSD Sewered Areas - 1978



**WESTERN LAKE SUPERIOR
SANITARY DISTRICT**
DULUTH, MINNESOTA

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1000 South Broadway St. Duluth, MN 55802



WLSSD Sewered Areas - 2017



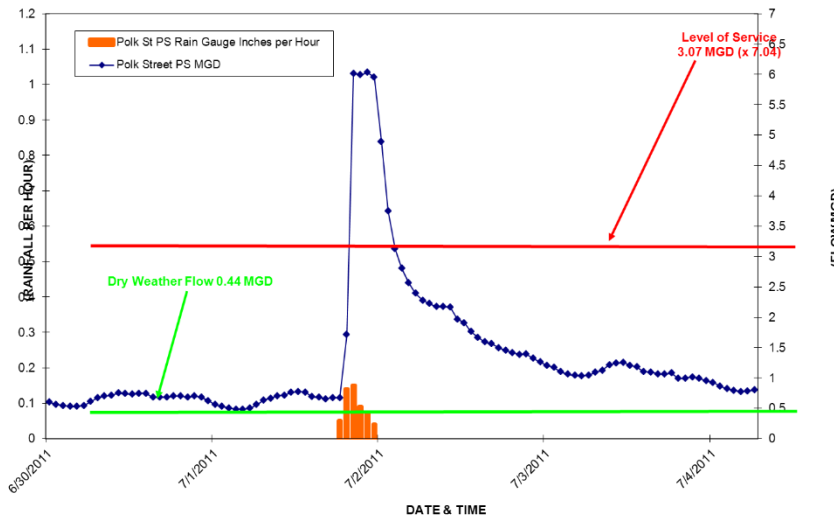
**WESTERN LAKE SUPERIOR
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DULUTH, MINNESOTA

Document Date: 12/22/16 10:51 AM and State Water Funding District Area 1571.mxd
Map Scale: 800000:1 8/22/16 Author: JG

Challenges to Further Expansion



POLK STREET PUMP STATION FLOW
June 30-July 4, 2011

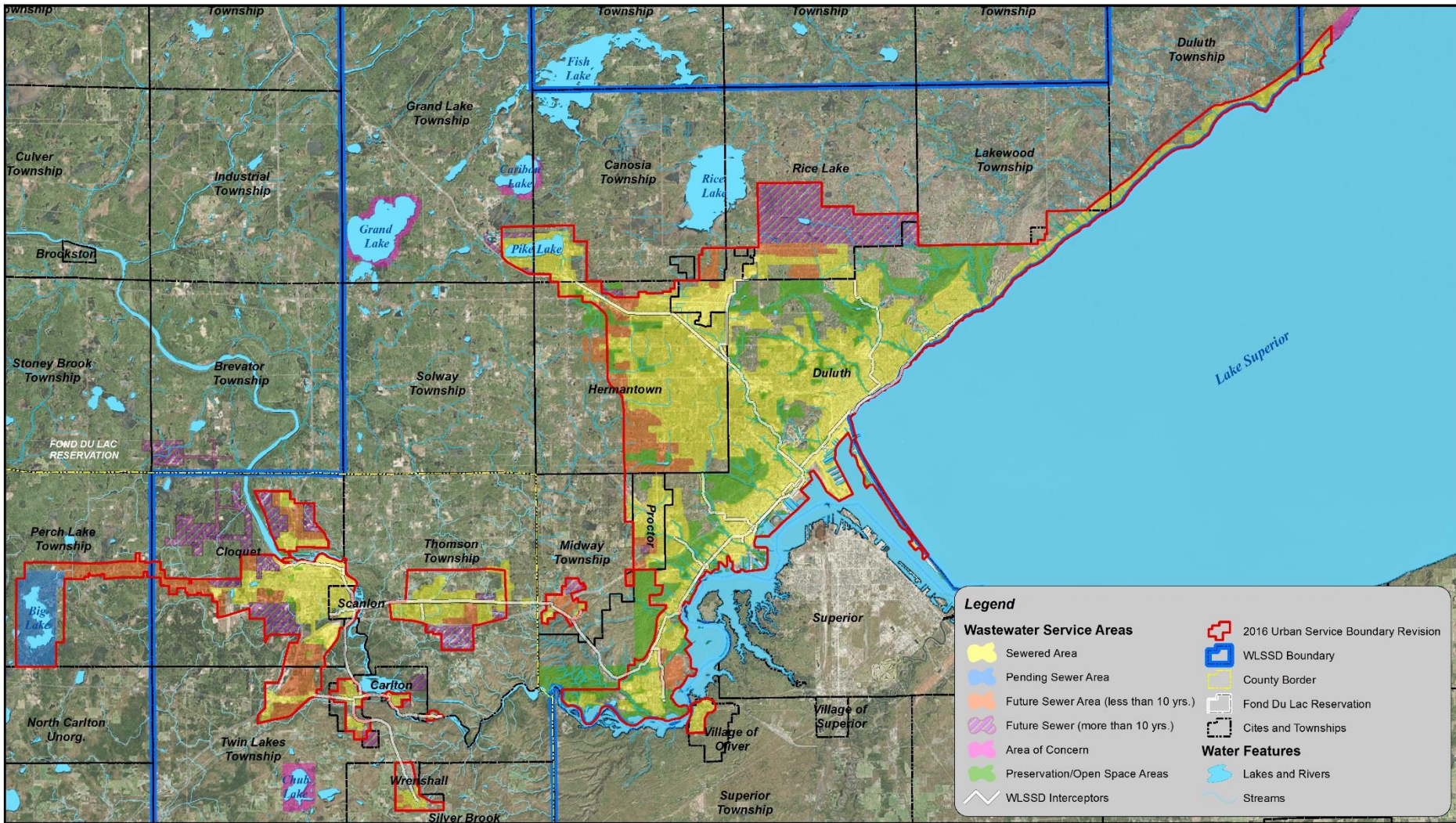


WLSSD Area Population Projections 2010 to 2040

Area	2010 Actual	2020 Projection	2030 Projection	2040 Projection
St. Louis County (WLSSD)	115,242	117,830	120,482	123,301
Duluth	86,265	86,616	86,966	87,318
Hermantown	9,414	10,559	11,705	12,950
Proctor	3,057	3,132	3,208	3,283
Rice Lake	4,095	4,347	4,615	4,900
Grand Lake Twp.	2,779	2,950	3,132	3,325
Lakewood Twp.	2,190	2,325	2,468	2,620
Canosia Twp.	2,158	2,291	2,432	2,582
Solway Twp.	1,944	2,064	2,191	2,326
Duluth Twp.	1,941	2,061	2,188	2,323
Midway Twp.	1,399	1,485	1,577	1,674
Carlton County (WLSSD)	22,294	24,143	25,074	25,415
Cloquet	12,124	13,224	13,734	13,921
Carlton	862	940	976	990
Scanlon	991	1,081	1,123	1,138
Wrenshall	399	435	452	458
Thomson	159	Merged w/ City of Carlton in 2015		
Thomson Twp.	5,003	5,457	5,667	5,744
Twin Lakes Twp.	2,108	2,299	2,388	2,420
Silver Brook Twp.	648	707	734	744
TOTAL WLSSD AREA	137,536	141,973	145,556	148,716

Sources: United States Census Bureau, MN State Demographer's Office, MIC Duluth-Superior Long Range Transportation Plan

Strategies for Dealing with Unsewered Areas



WLSSD Urban Services Boundary



**WESTERN LAKE SUPERIOR
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Updated: 08/11/2016 08:00 AM and State Water Forestry Office, Services, Boundary 2016 Urban Service Boundary 2016 Urban Service Boundary Revision 01/16/2016 08:00 AM

Big Lake Area

➤ **Issues**

- Failing on-site septic systems
- Limited onsite solutions on small lake lots

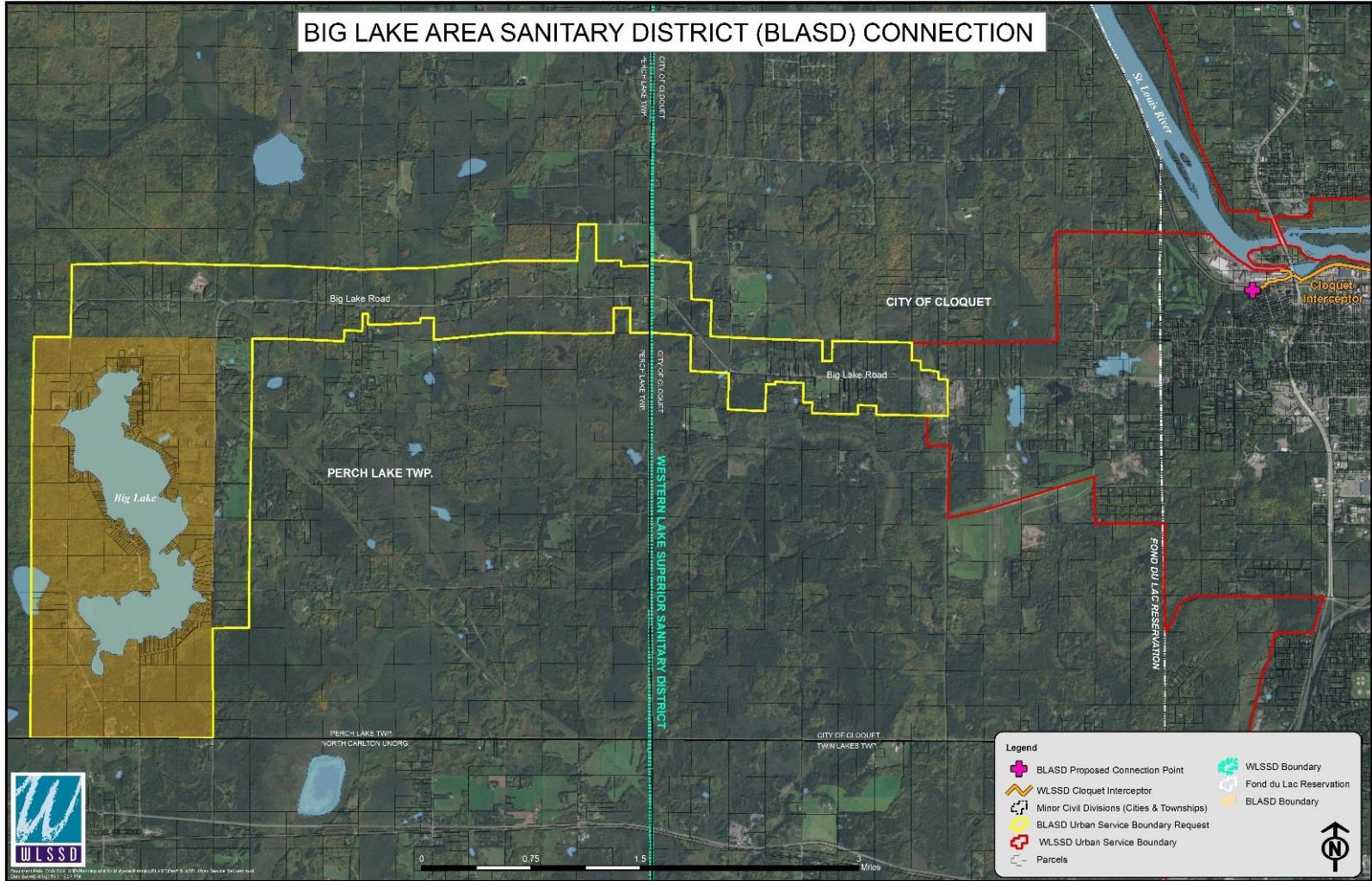
➤ **Challenges**

- Proximity to existing municipal wastewater treatment systems > 8 miles
- Limited affordable and technically feasible treatment options
- To provide off site treatment for nearly 350 existing homes
- Coordination between multiple governmental units

➤ **Solutions**

- Creation of the Big Lake Area Sanitary District (BLASD)
- Development of a regional solution with connection to the WLSSD treatment system
- Financial support from Federal and State

BLASD



Pike Lake

➤ **Issues**

- Failing on-site septic systems
- Limited onsite solutions on small lake lots with high water table and individual wells

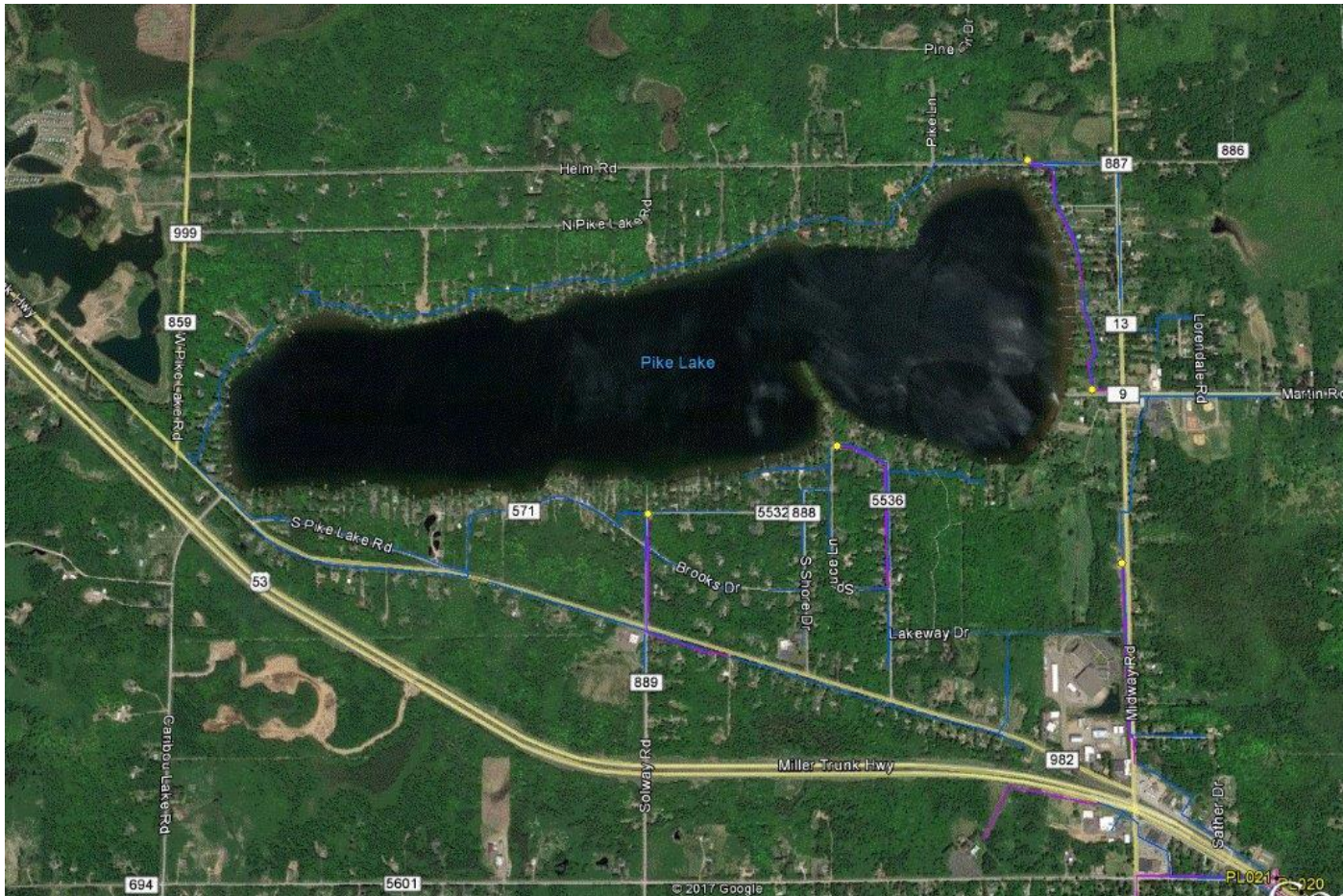
➤ **Challenges**

- Lake split by 2 Townships
- Affordability and application of feasible treatment options

➤ **Solutions**

- Creation of the Pike Lake Area Wastewater Collection System (PLAWACS)
- Joint Powers Agreement between the two townships
- Connection to the WLSSD treatment system
- 4 million WIF Grant and 4 million low interest loan from PFA

PLAWCS



North Shore

➤ **Issues**

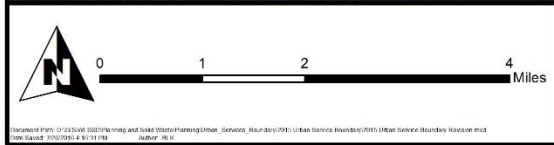
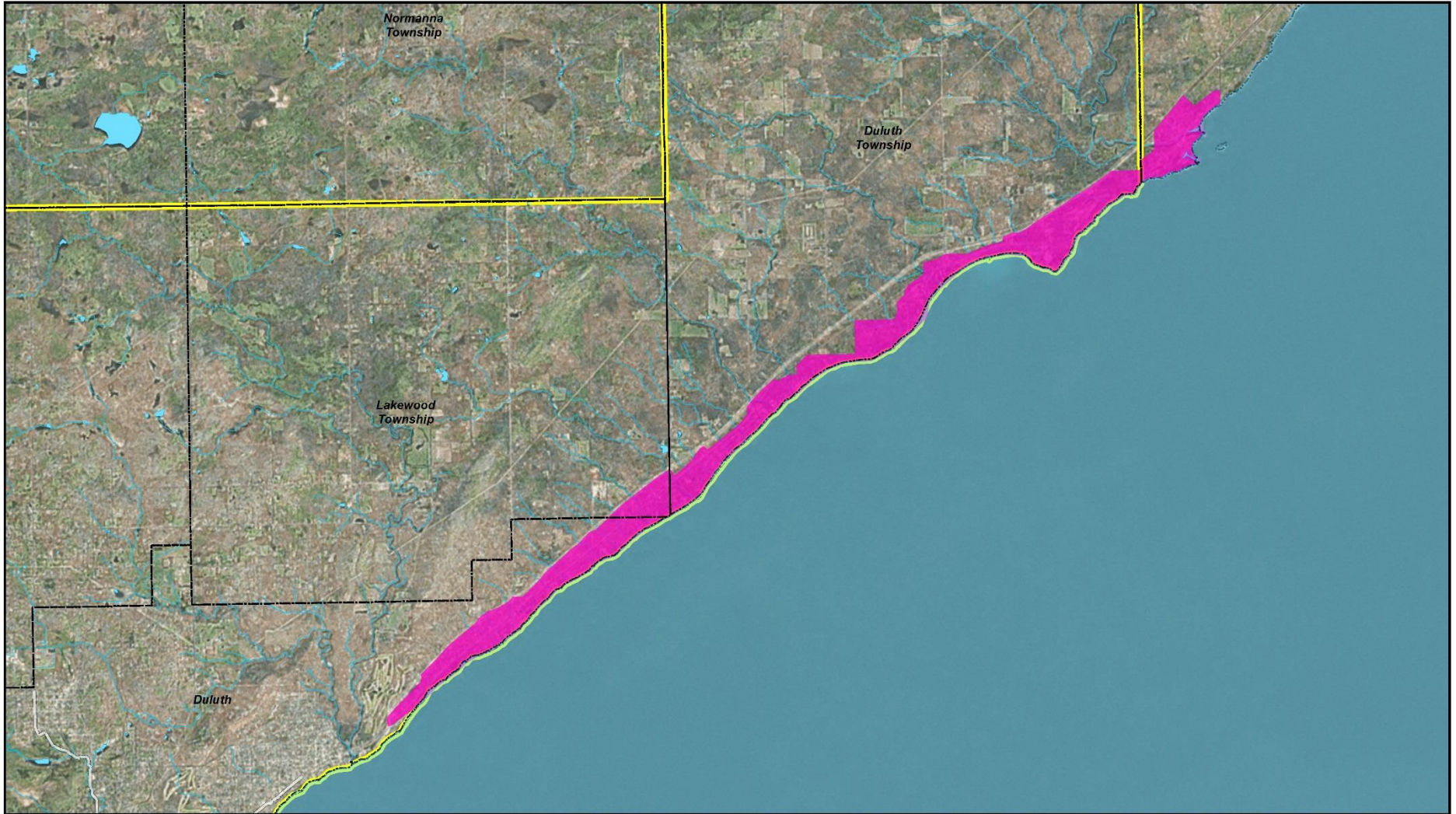
- Failing on-site septic systems
- Limited onsite solutions due to thin / unsuitable soils

➤ **Challenges**

- Proximity to existing municipal wastewater treatment systems
- Limited affordable and technically feasible treatment options

➤ **Solutions**

- Creation of the Duluth North Shore Sanitary District (DNSSD) and Knife River Sanitary District (KRSD)
- Development of a regional solution with connection to the WLSSD treatment system



**Duluth North Shore Sanitary Distict &
Knife River Larsmont Sanitary District**



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DULUTH, MINNESOTA

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Questions

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