

Information Item: **Clean Water Act**

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Agenda



**We awaken
to the problems**



**Clean Water Act
basics**



**Role of the states
in water quality protection**

Pre-1972

We awaken

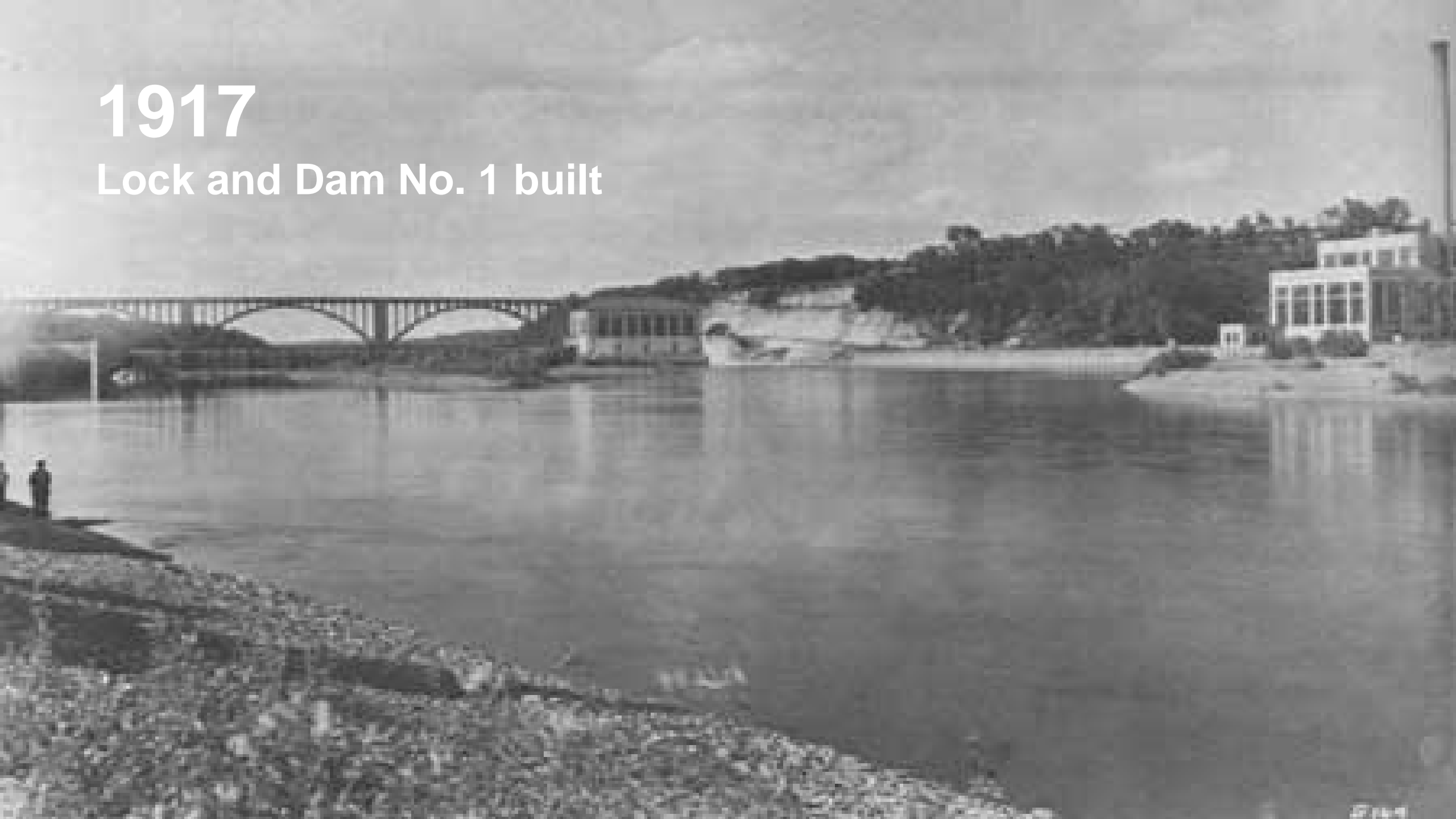
1871

City sewers drain raw sewage to river



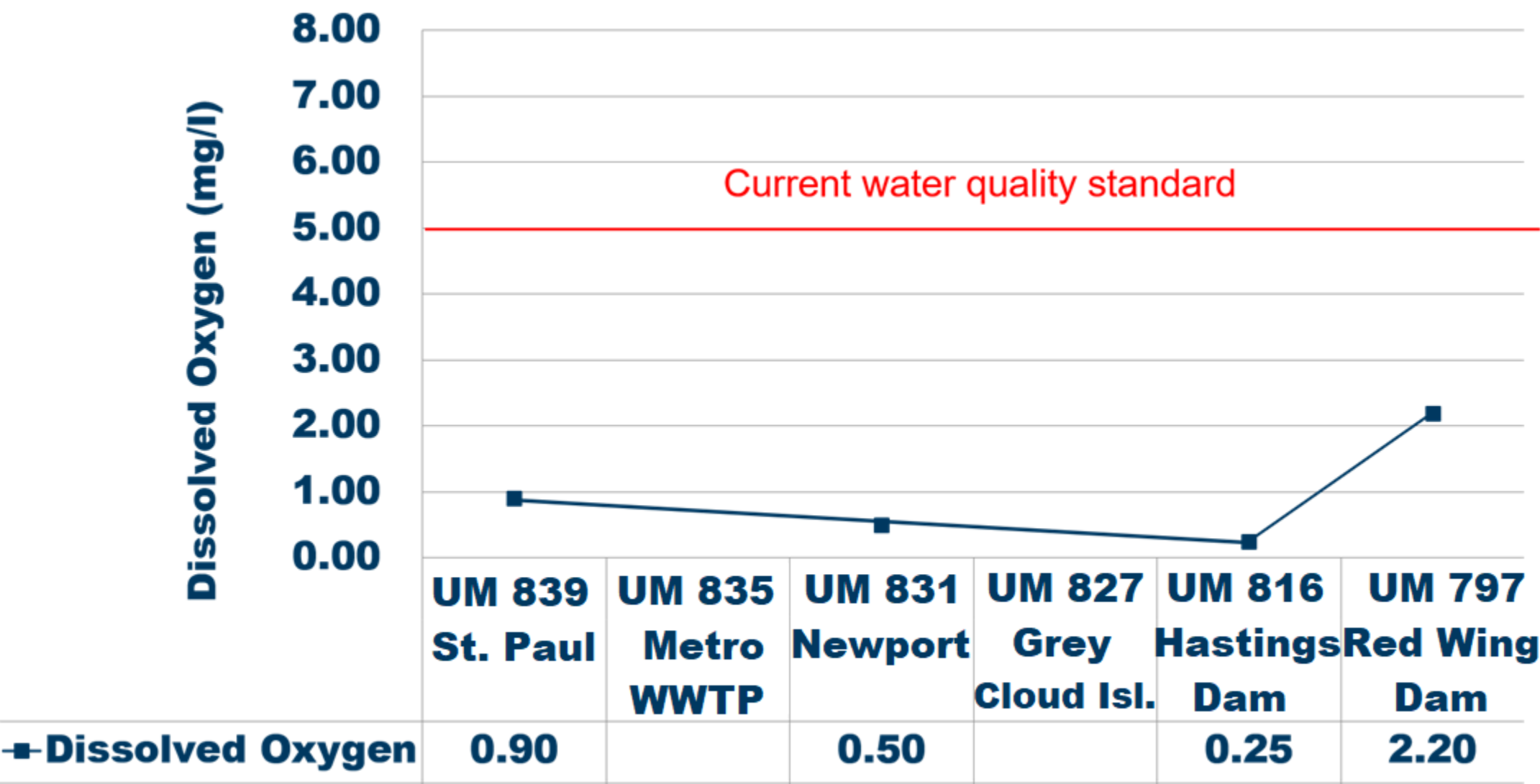
1917

Lock and Dam No. 1 built



Mississippi River: 1926

Mean August Dissolved Oxygen Concentration



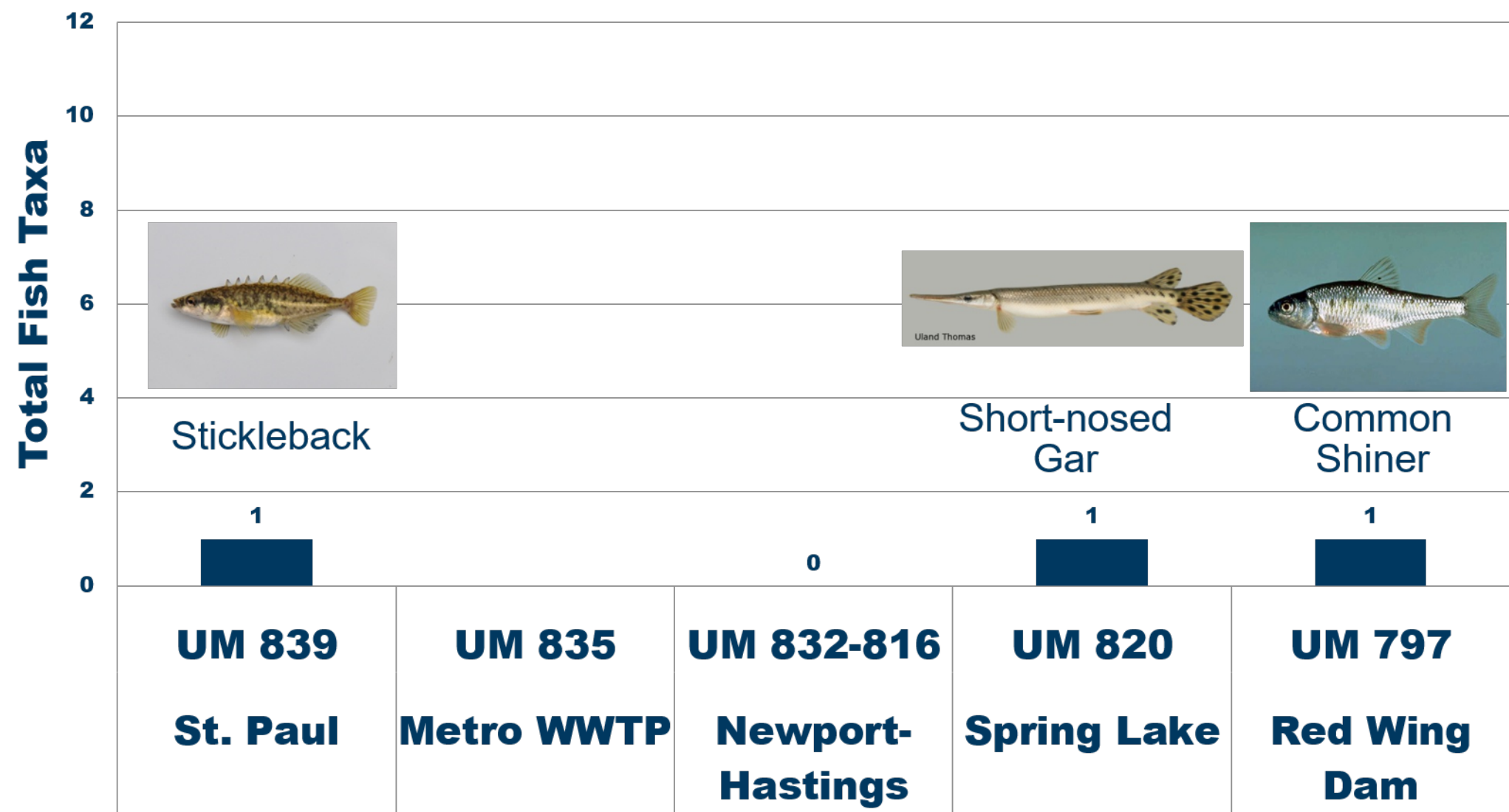
Coliform Bacteria Concentrations

Mississippi River: August 1926

Site	Coliform Bacteria (No. / 100ml)
St. Paul (UM 839)	296,400
Newport (UM 831)	75,500
Hastings Dam (UM 816)	275,000
Red Wing Dam (UM 797)	14,700

Current water quality standard for E. coli bacteria = 126/100 ml

Mississippi River Fish Survey: 1926

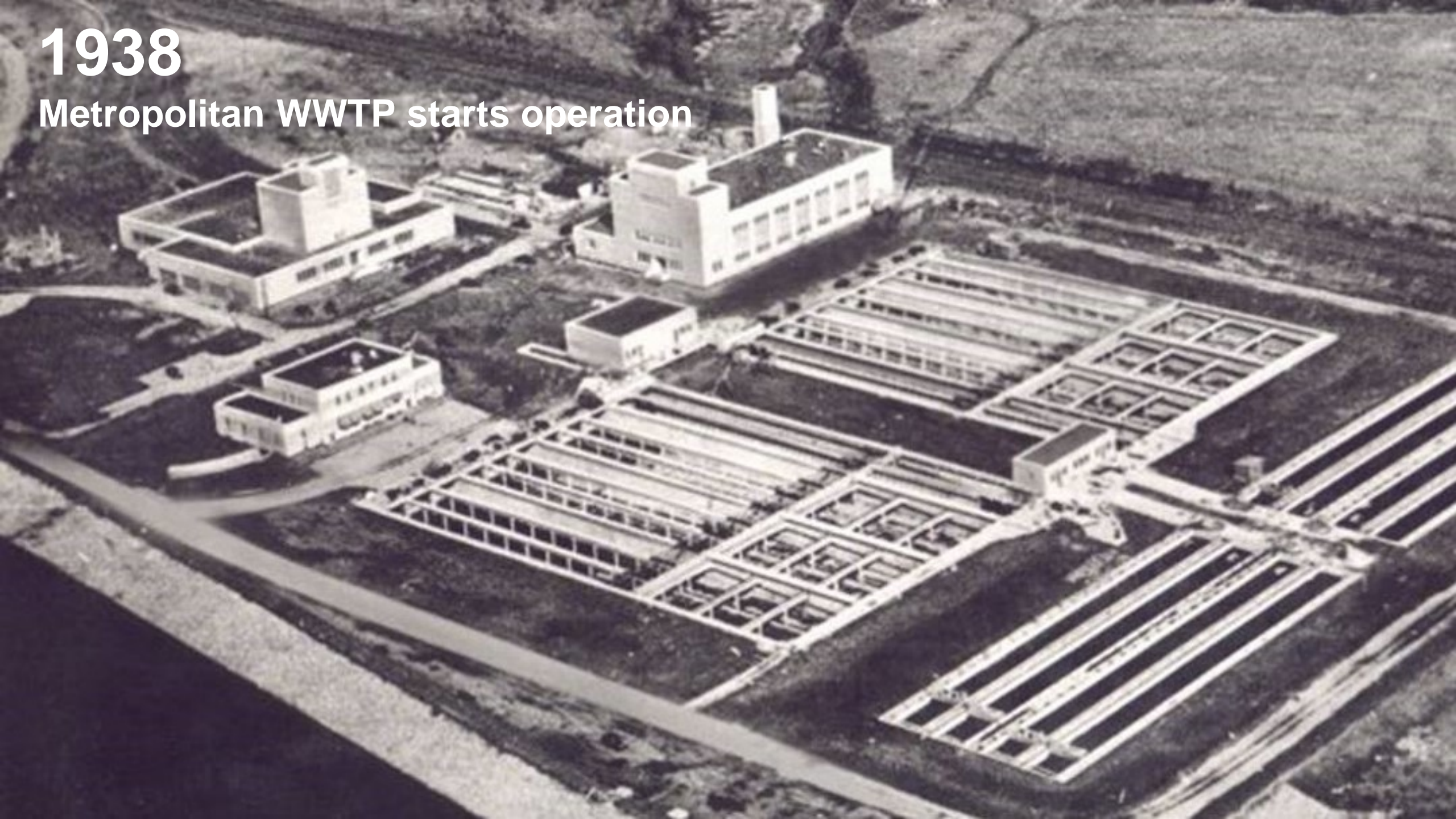


928
ppi a
azard



1938

Metropolitan WWTP starts operation

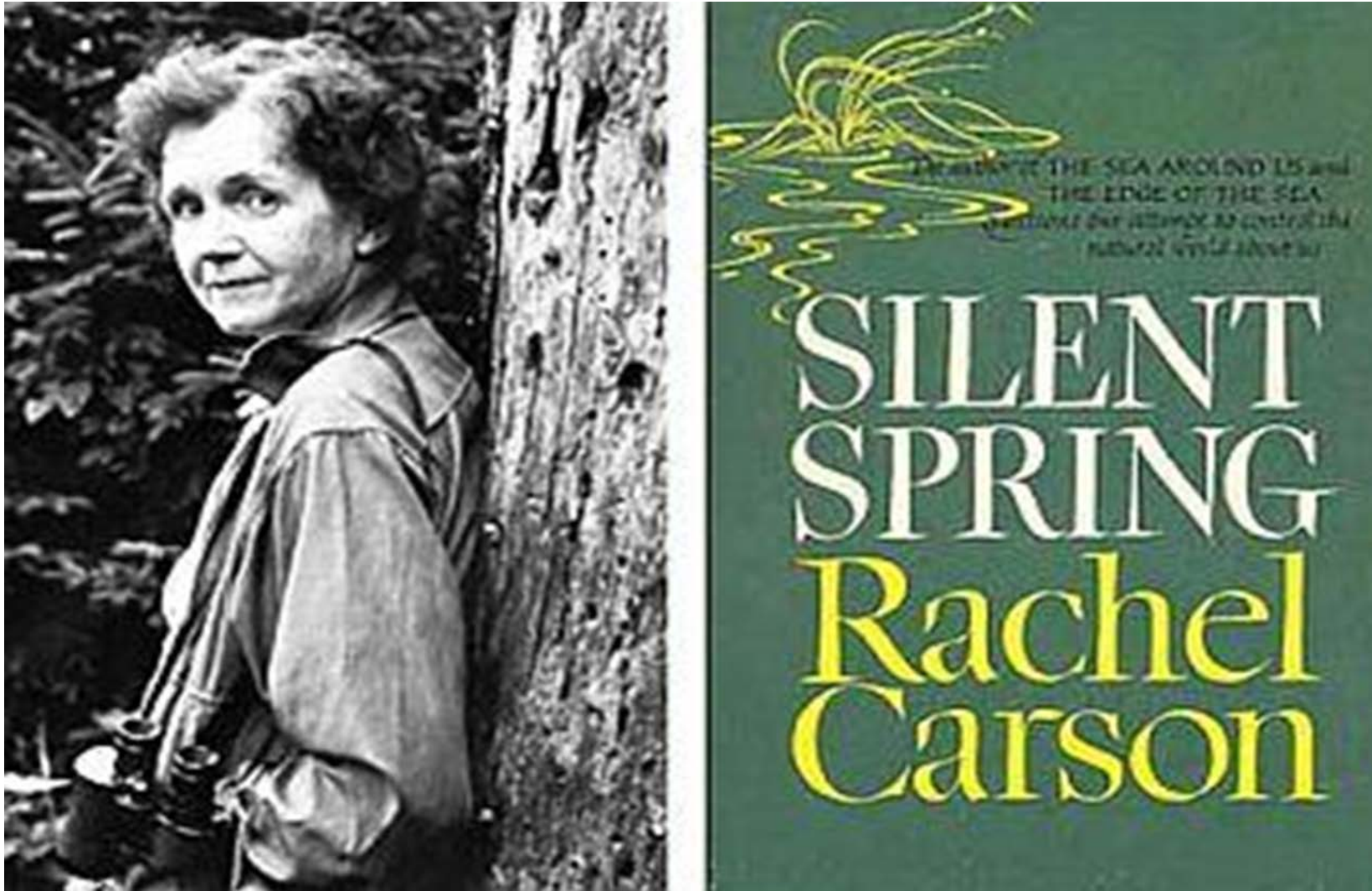


Metropolitan Wastewater Treatment Plant: 1966



Rachel Carson (1907 – 1964)

Mother of the Environmental Movement



1969

Cuyahoga River burns



1970

Nixon Creates U.S. Environmental Protection Act



1972

Congress passes Clean Water Act
over Nixon veto



1972 Clean Water Act



OBJECTIVE

Restore and maintain the chemical, physical and biological integrity of the nation's waters



GOALS

All waters to be fishable and swimmable by 1983

Eliminate the discharge of pollutants by 1985

What is protected?



Navigable waters



Surface waters



Drinking water

CWA Titles



1

Research and
related
programs

2

Grants for
construction
of treatment
works

3

Standards
and
enforcement

4

Permits and
licenses

5

General
provisions

6

State water
pollution
control
revolving funds

Standards: Establishing Protective Conditions



3 parts to water quality standards

- What are we protecting
Beneficial Uses
- What conditions protect beneficial uses
Federal WQ criteria and MN WQ standards
- How to maintain high water quality
Antidegradation



States

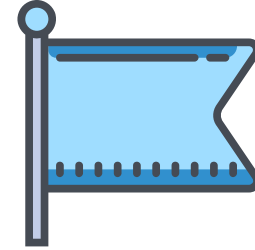
- Designate beneficial uses of each water body
- Set chemical, physical or biological water quality standards for each water body based on beneficial use



EPA

- Approves state program
- Sets standards when states do not

Wastewater Discharge Permits



- Establish permit effluent limits for municipal and industrial dischargers
- Permit conditions include pretreatment requirements
- Asset Management is required

State Revolving Loan Program

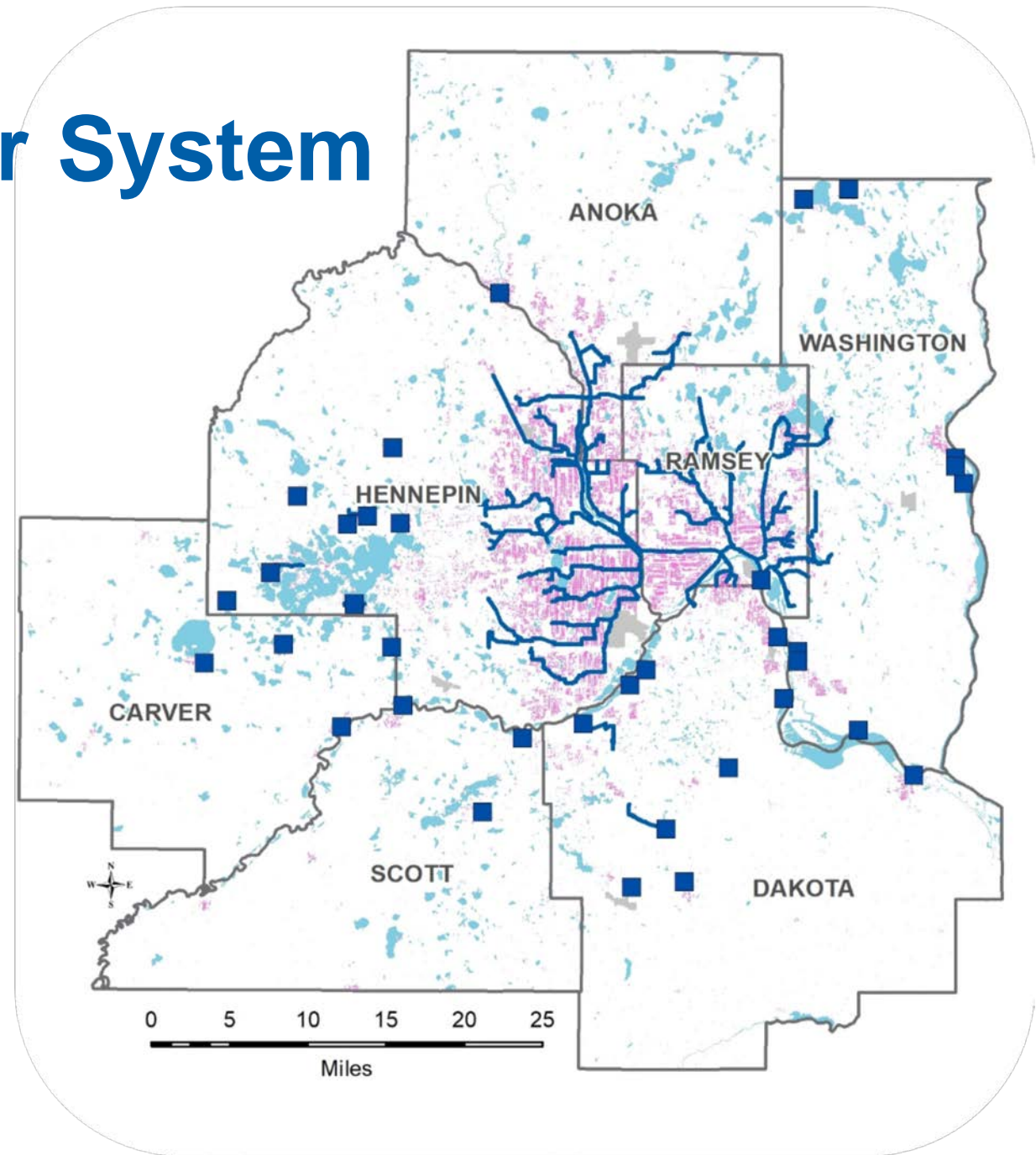


1972 and 1987 CWA

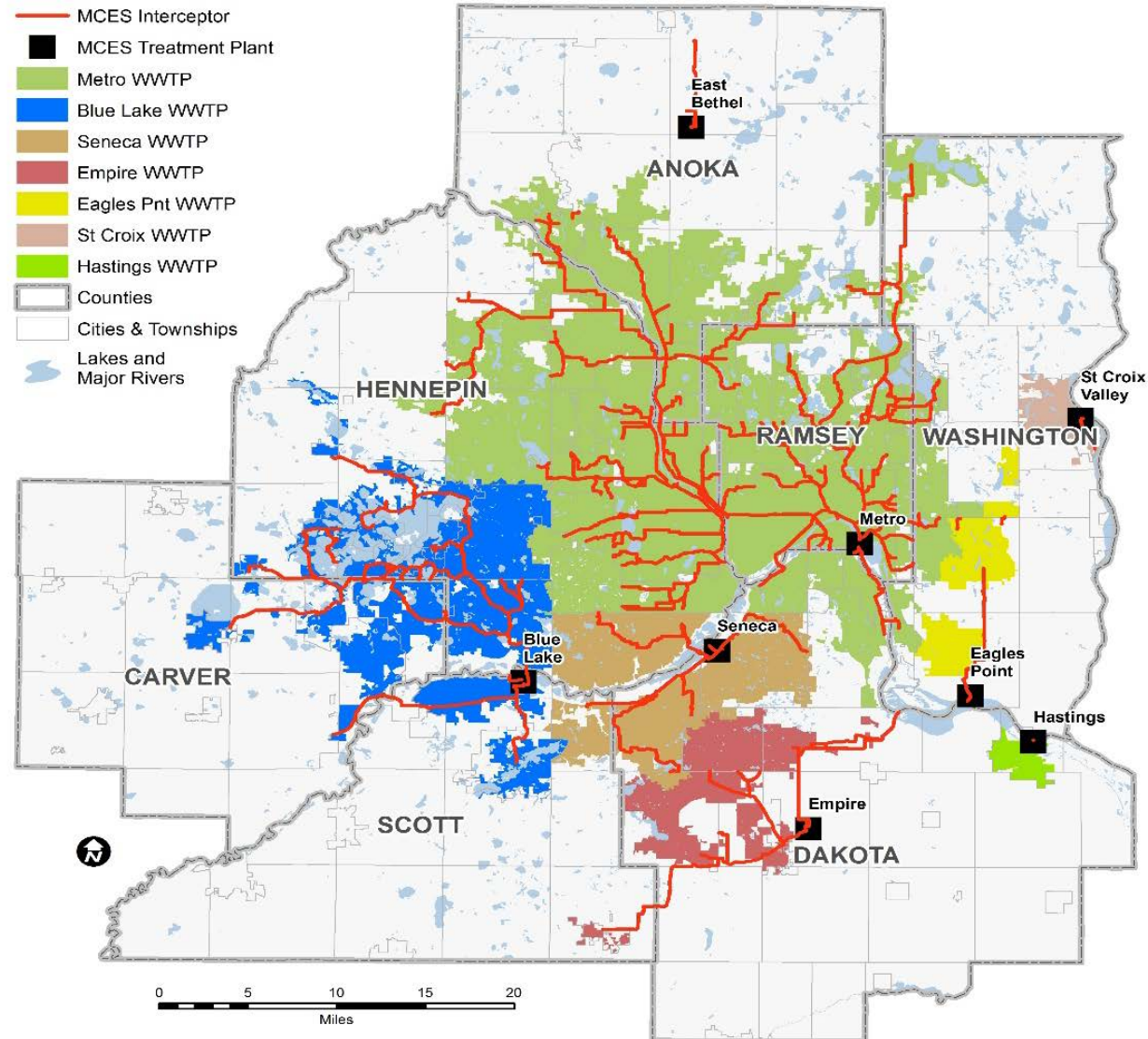
- 1972 Act establishes grant program:
 - Plan and design municipal treatment works
 - Construct municipal treatment works
 - 75-90% grants, 10% local funds
- 1987 Amendments phased out federal grants
 - Allows states to set up SRFs
 - EPA phased out by 1994

1969 Local Wastewater System

35 Local
Wastewater
Treatment
Plants



Areas Served by Regional System



Progress in the Metro area

'75

First NPDES Permit issued to Metro Plant

'78

Metro must meet new CBOD5 limits

'83

MN/WI agree to separate combined sewers

'88

Historic drought leads to algal blooms + fish kills in Lake Pepin

'88

Blue Lake & Seneca must meet new limits

'98

Metro NDPES permit incorporates Hg Reduction Strategy

Final Thoughts



We protect public health
and the environment
EVERY DAY



We learn new things so
there will always be new
standards



Maintain progress
through ongoing
investment in our system



Creative solutions to address
increasing population, climate
change and land use changes

Questions

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