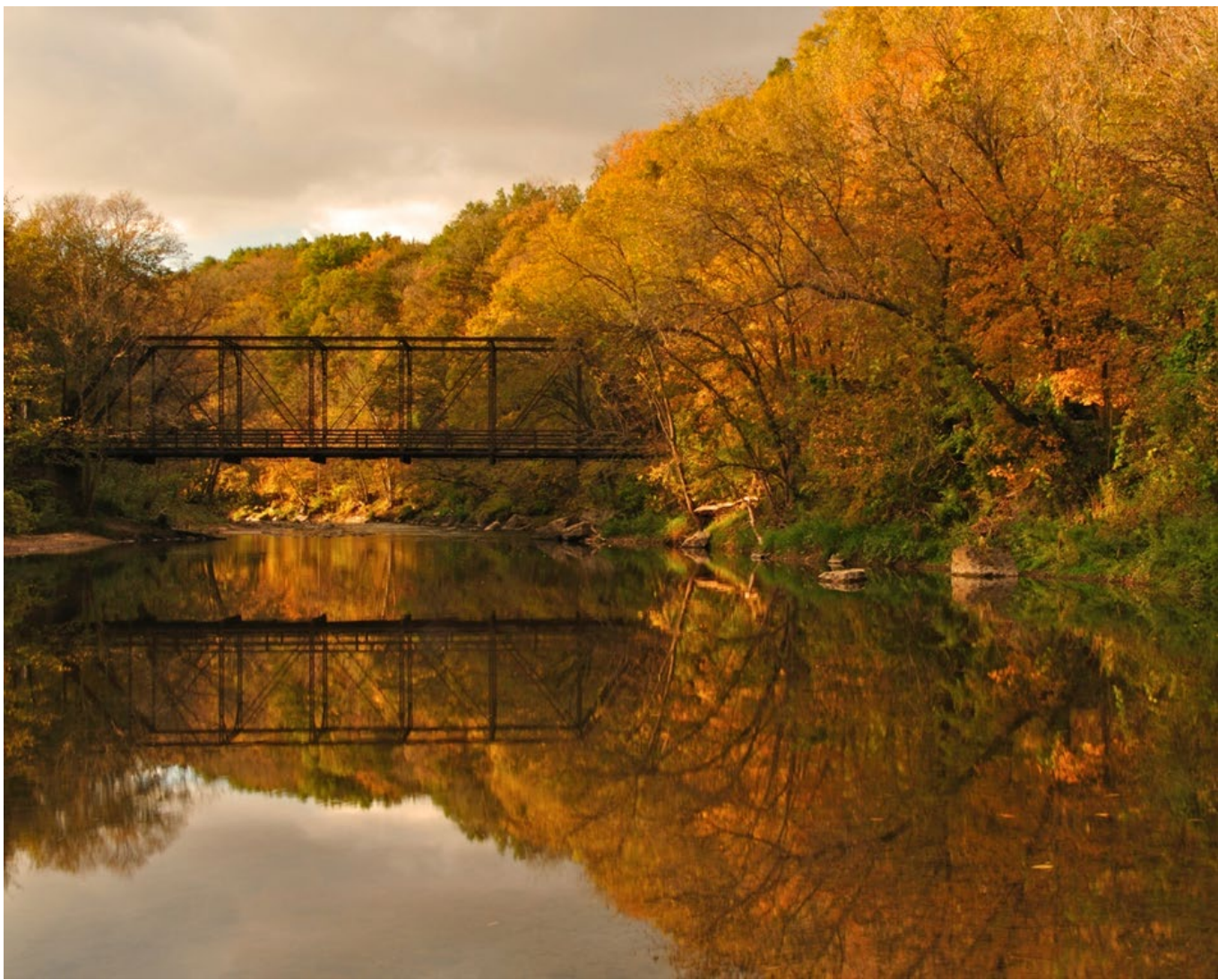




IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES





When water quality was worse:



There were times when the flow [in the Missouri River] along the west shore was literally red with blood. Great mats of congealed grease floated downstream for miles and entrails collected in scummy islands.

Packing house waste being discharged to the Floyd River in Sioux City, August 1952.

Des Moines Register, November 19, 1969

Sewage Pre-Treatment Plant In Omaha Ends Bloody River

By a Staff Writer

OMAHA, NEB. — One of the worst pollution situations in the entire nation has been all but eliminated here with completion of a sewage pre-treatment plant for the huge Omaha livestock industry.

This city's stockyards and packing industry have been among the largest in the world since the mid-1950s. Since that time and before, all the waste — millions of gallons a day — has been dumped untreated into the Missouri River.

There were times when the flow along the west shore was literally red with blood. Great mats of congealed grease floated downstream for miles. Air and entrails collected in scummy islands.

"The Worst"

"People who know have told me this was absolutely the worst pollution they have seen anywhere in the U.S.," says Earl Chloupek, area representative for the Federal Water Pollution Control Commission in Lincoln, Neb.

Now the bloody flow into the river has stopped, thanks to the unique pre-treatment plant which began its shake-down last week. The \$5.5 million plant is expected to go

into full operation later this month.

Federal efforts to end the flow of packinghouse wastes into the river began in 1956 — 13 years ago — Chloupek said. The river still is far from clean, he said, but it has passed a "real milestone" this week.

The City of Omaha still only has primary treatment for its wastes, but has agreed in principle to construct secondary treatment facilities, Chloupek said. No timetable has been established.

Primary treatment moves sewage solids, 35 per cent of the pollution. Secondary treatment removes about 90 per cent.

Omaha's primary treatment plant went into operation four years ago. Before that, it too dumped all its waste into the river.

As it was, Chloupek said, the city plant has been operating only half of its capacity because, without pre-treatment, it was unable to handle the packinghouse wastes. So half the plant has been idle for years waiting for the pre-treatment plant.

This half was placed in operation for the first time last week, Chloupek said, when it

began handling the effluent from the pre-treatment plant.

Income Gained

The uniqueness of the pre-treatment plant lies in its use

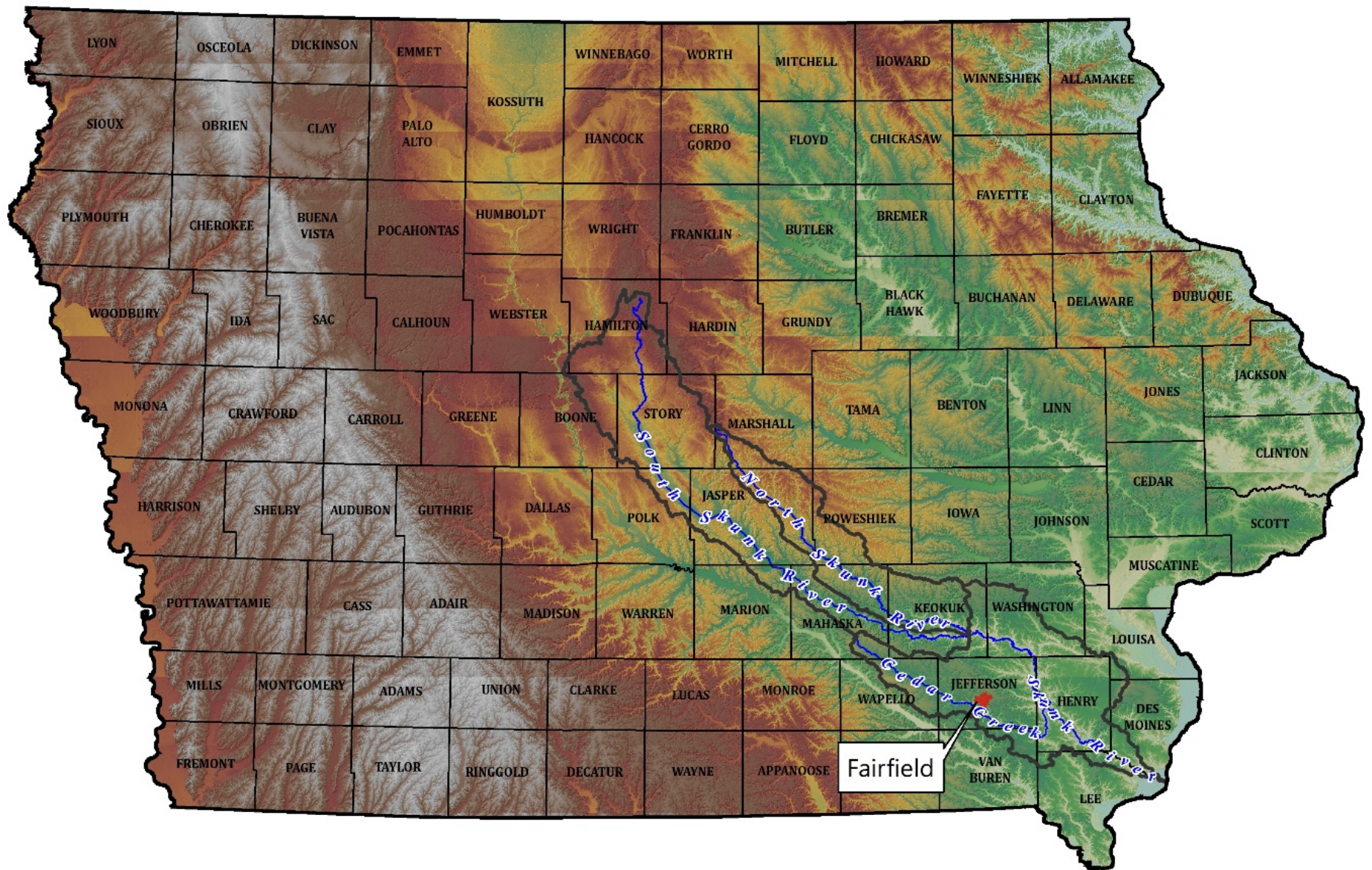
Omaha's primary treatment plant went into operation only four years ago [~1965]. Before that, it too dumped all its wastes untreated into the [Missouri] river.

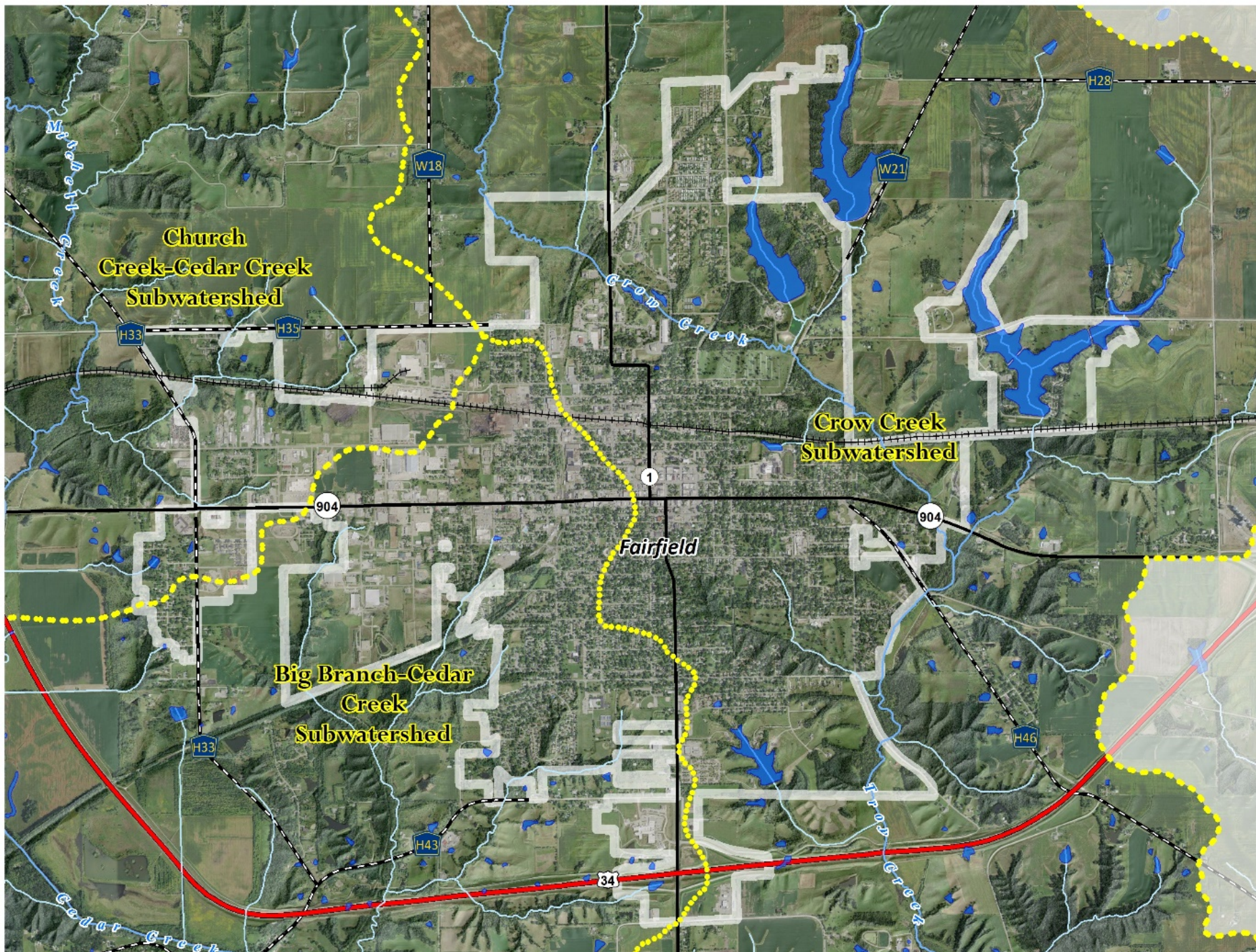
built by the Carver-Greenfield Corp. Kirkham, Michael & Associates were the consultants.

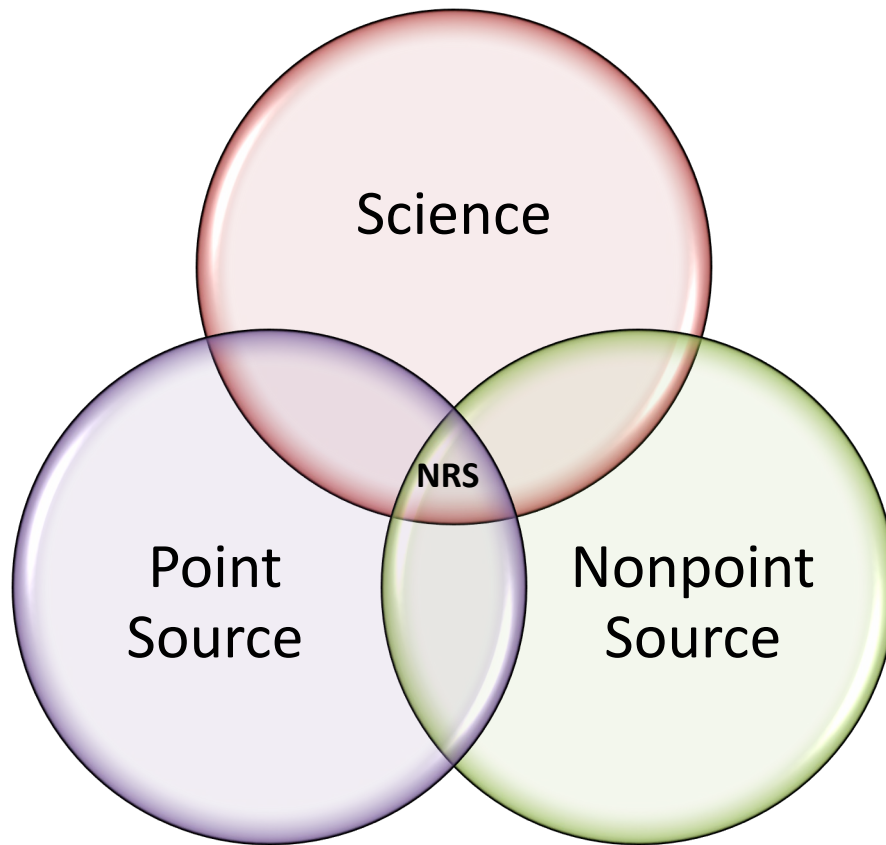


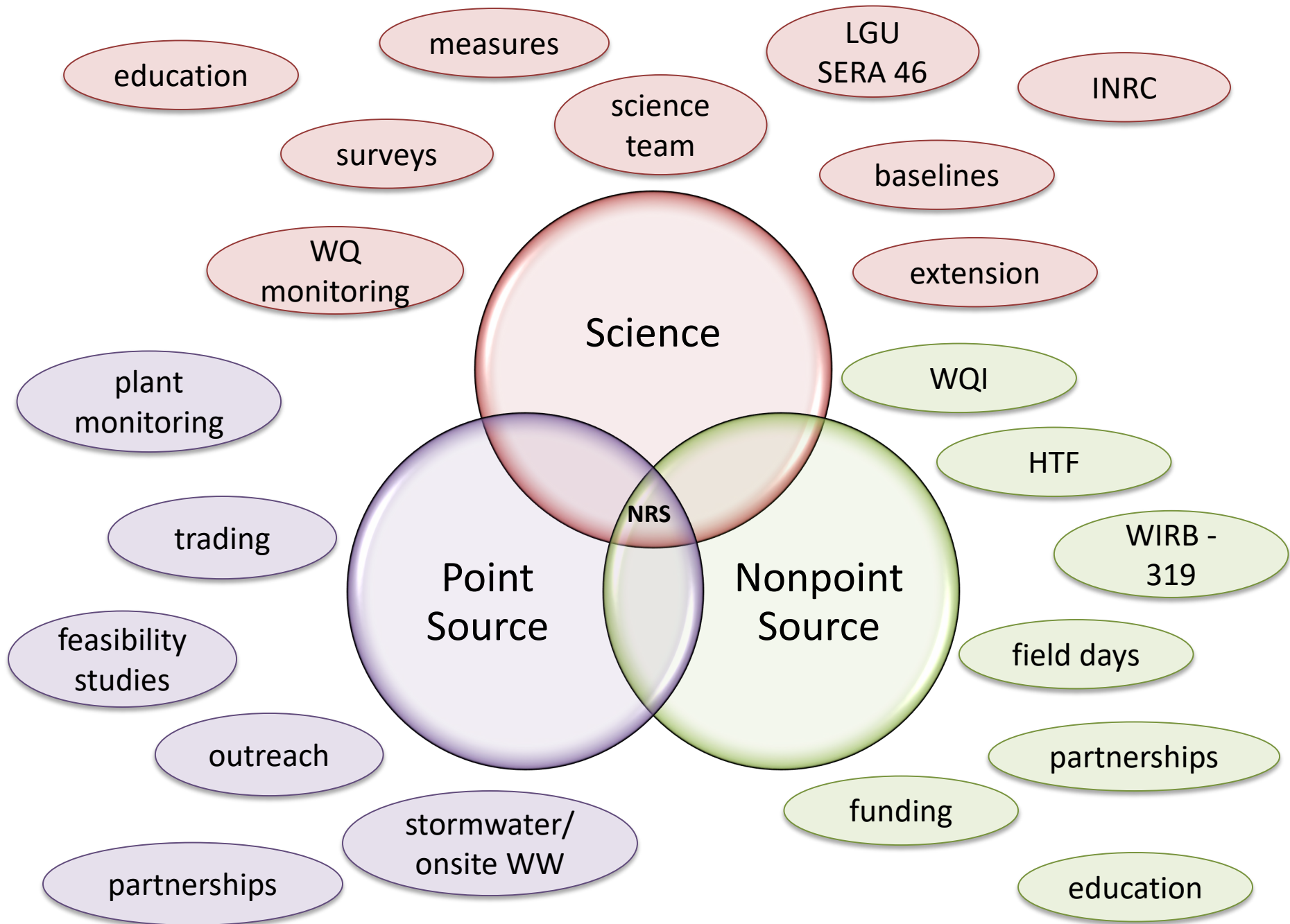
Common Threads for Iowa's Nutrient Reduction Strategy

- acknowledgement of the problem
- leadership alignment
- science-based, practical approach
- implementation structure











INPUTS

- People
- Funding
- Agency resources
- Private sector resources



HUMAN

- Partner organizations
- Partner agribusinesses
- Farmer knowledge and attitude
- Point source communities and management knowledge and attitude



LAND

- Land use changes
- Practice adoption
- Point source implementation



WATER

- Calculated load reduction
- Measured loads in priority watersheds
- Organized watersheds reported load changes
- Measured loads at existing monitoring stations



Iowa Nutrient Reduction Strategy Annual Progress Report

Prepared by:
Iowa Department of Agriculture and Land Stewardship,
Iowa Department of Natural Resources,
Iowa State University College of Agriculture and Life Sciences

INRC 0015 December 2017

Iowa Point Source Monitoring

September 2013

October 2018

ZERO facilities sampling,
NRS based off of
engineering assumptions

~5 years

130 facilities X 4 samples/wk X 52 weeks
=
~27,000 samples annually
(approximately \$975,000 annually)

Examples of point source progress

- Cedar Rapids
- Des Moines WRA
- Sioux City
- Tyson Fresh Meats - Perry and Storm Lake
- Clinton
- 2018 Construction Season
 - Grinnell, Eagle Grove, West Burlington, DairiConcepts

Nutrient Reduction Exchange

Iowa League of Cities Conservation Innovation Grant in 2015

Purpose: to register and track nutrient reductions resulting from installed best management practices (BMPs) that target INRS goals

1. **Process** – NPDES permit integration (DNR) & application submittals
2. **Incentives** – evaluation of regulatory authority and potential for use
3. **Database** – *USACE RIBITS Iowa Pilot*
4. **NRE placement** – evaluation of NRE placement in rule or policy
5. **Nutrient Load Reduction Model** – evaluation and implementation of a specific model or models for load reduction estimates

Thanks for the opportunity to be a part of this event!!

Looking forward to the discussion!!