IOWA WATER QUALITY INITIATIVE

from strategy to implementation

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IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Water Quality Initiative
highlights

- Addressing the scale needed to address the goals of the NRS
  - Traditionally soil conservation and in-field nutrient management based
  - Advance understanding and critical practices and delivery of practices focusing on addressing nutrient reduction
  - Leverage and expand state and farmer resources
- Tracking and documenting progress
  - Collective effort of management and practice installation
  - ISU established measurement coordinator in 2015
  - Utilize information to inform progress, but also inform/prioritize resources

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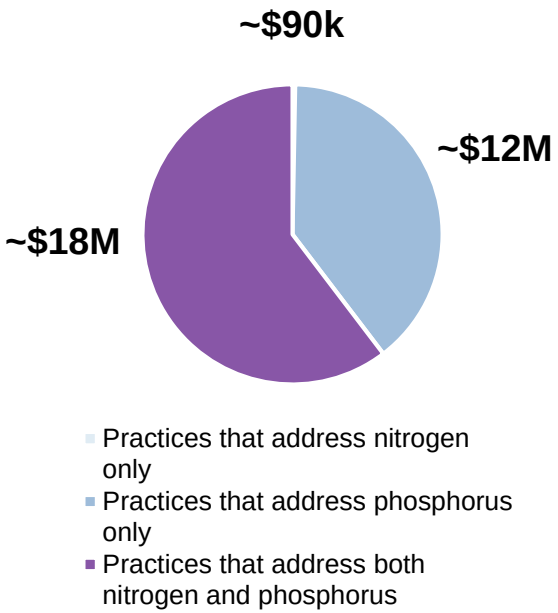
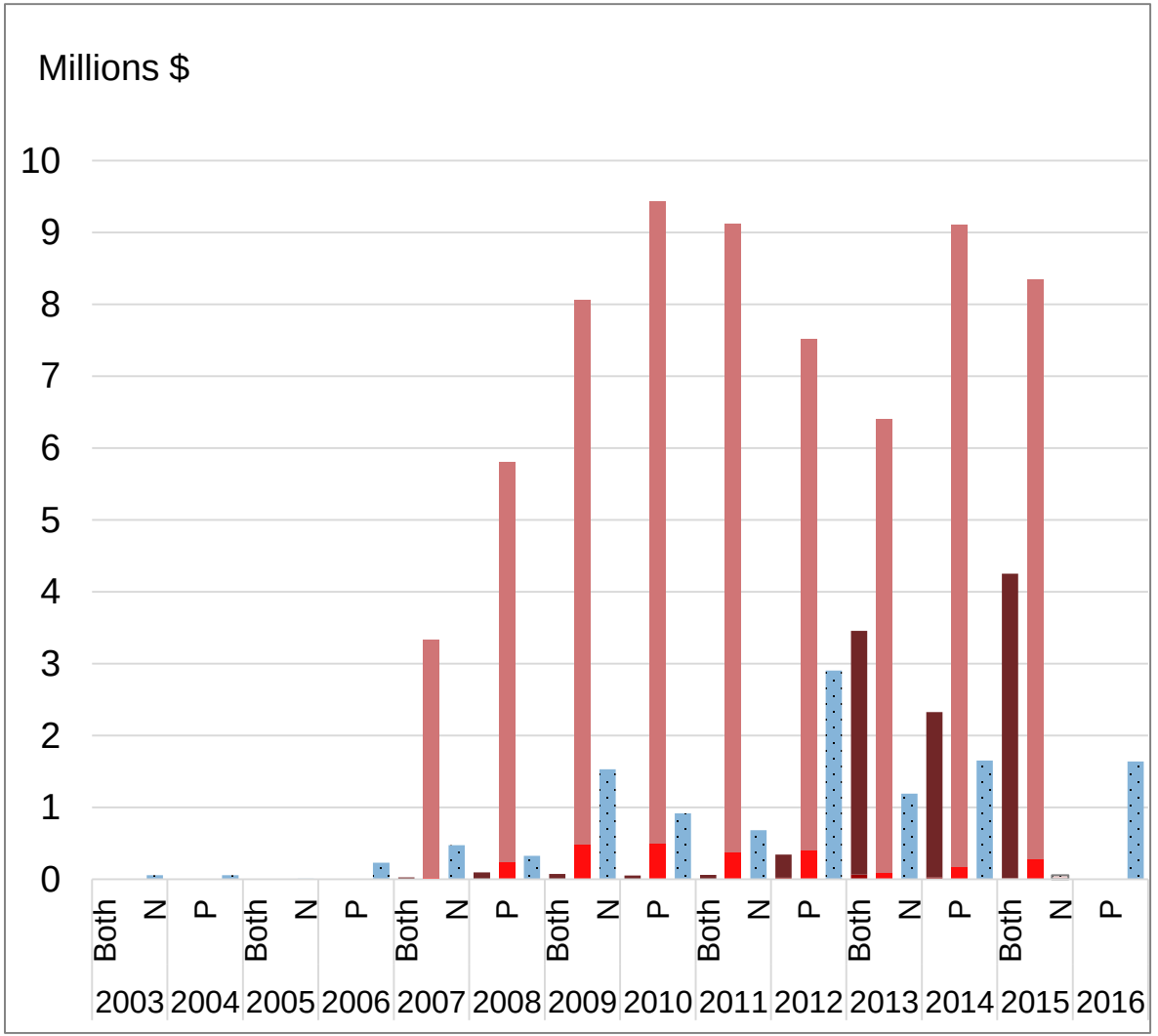
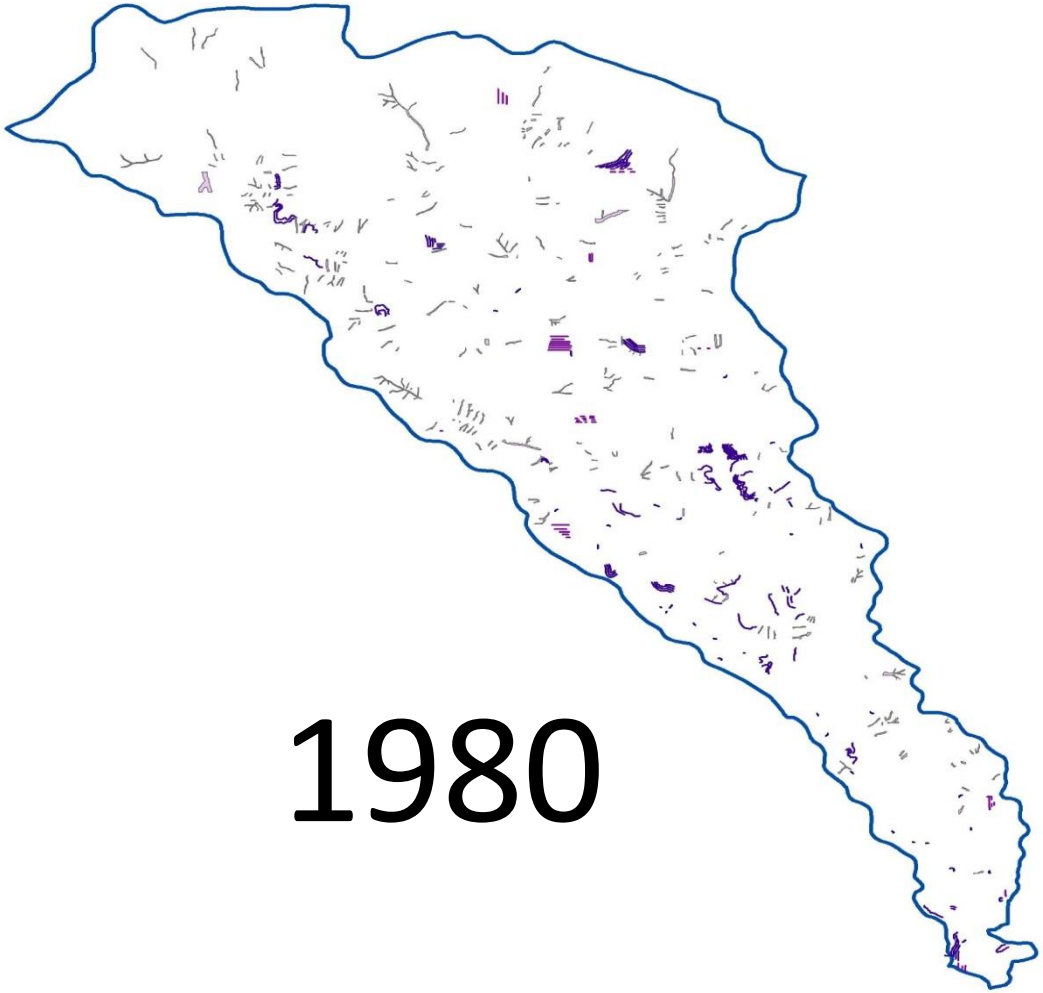
Conservation Investment

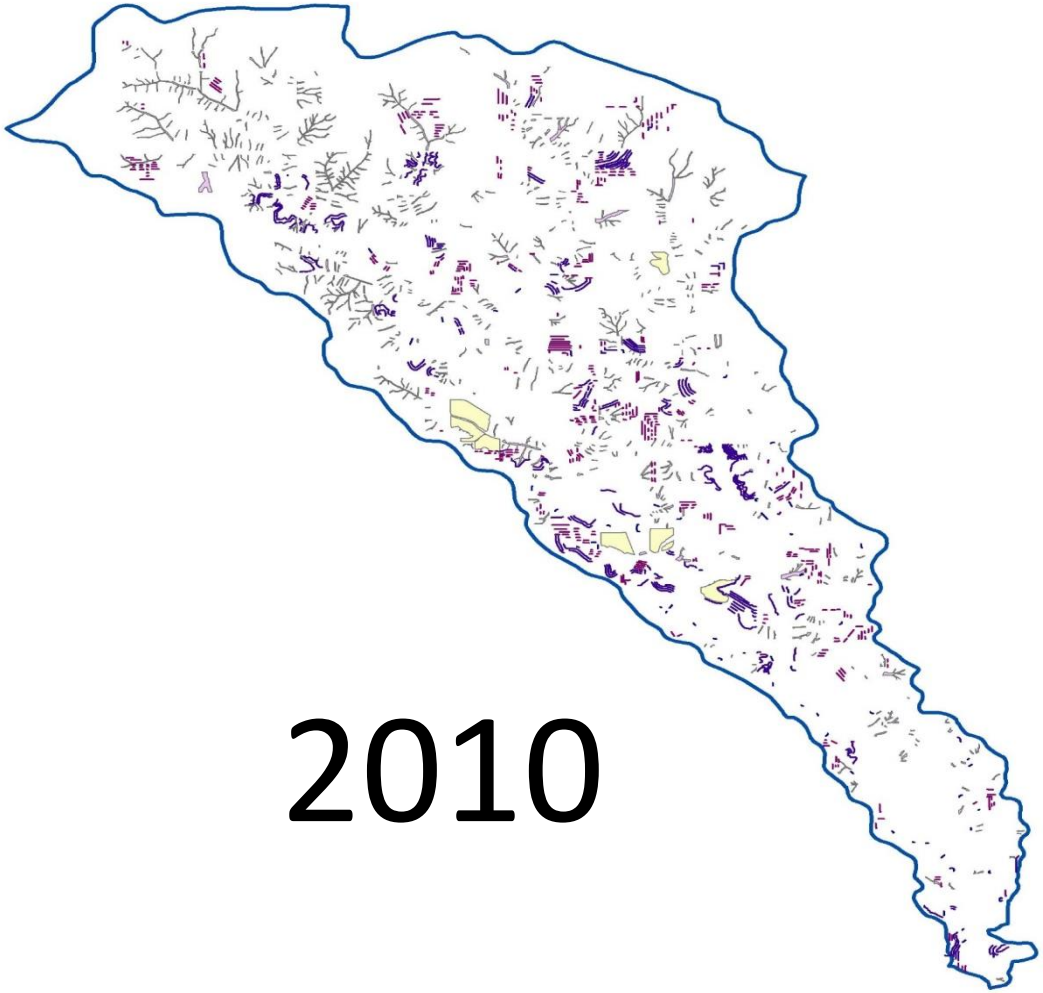
the numbers



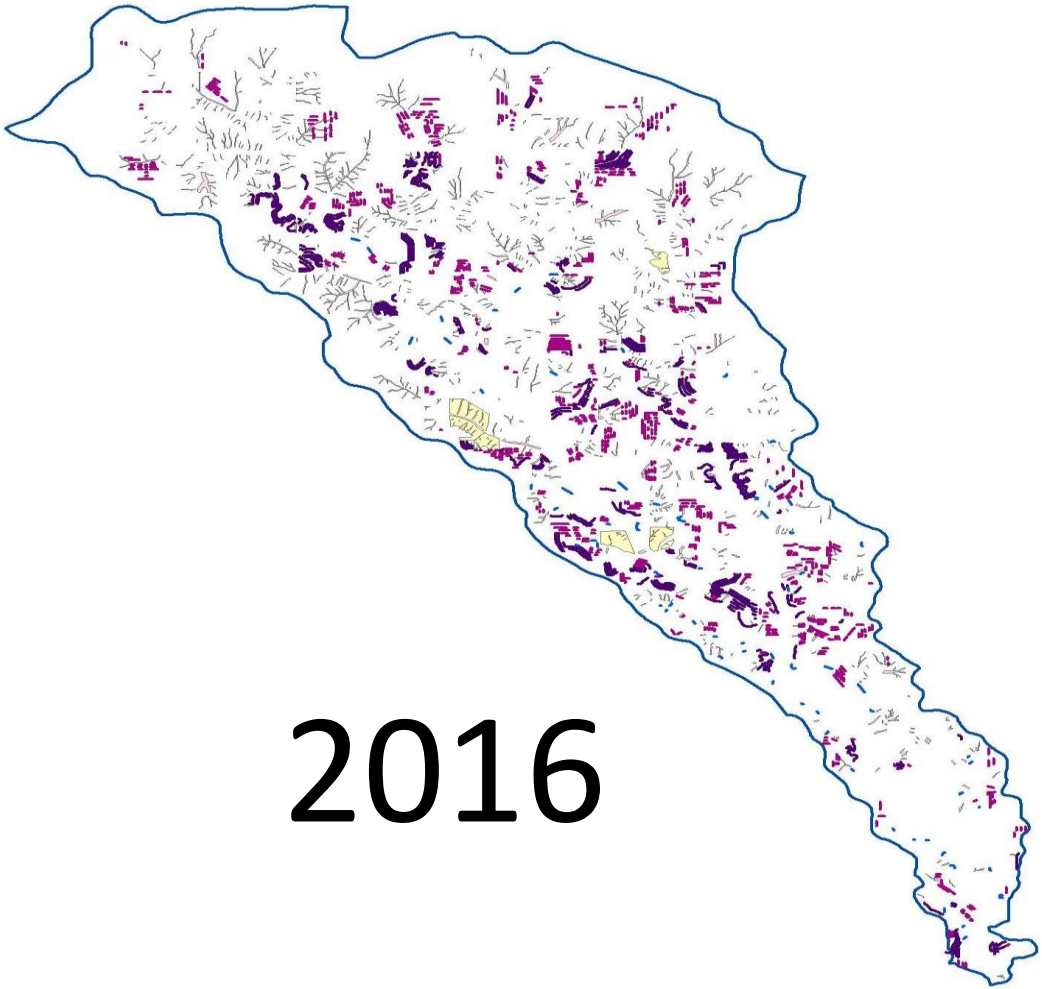




1980



2010

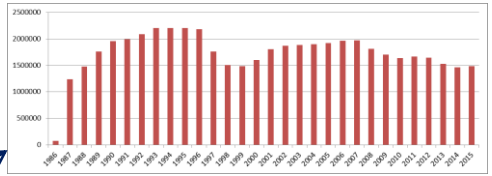


2016

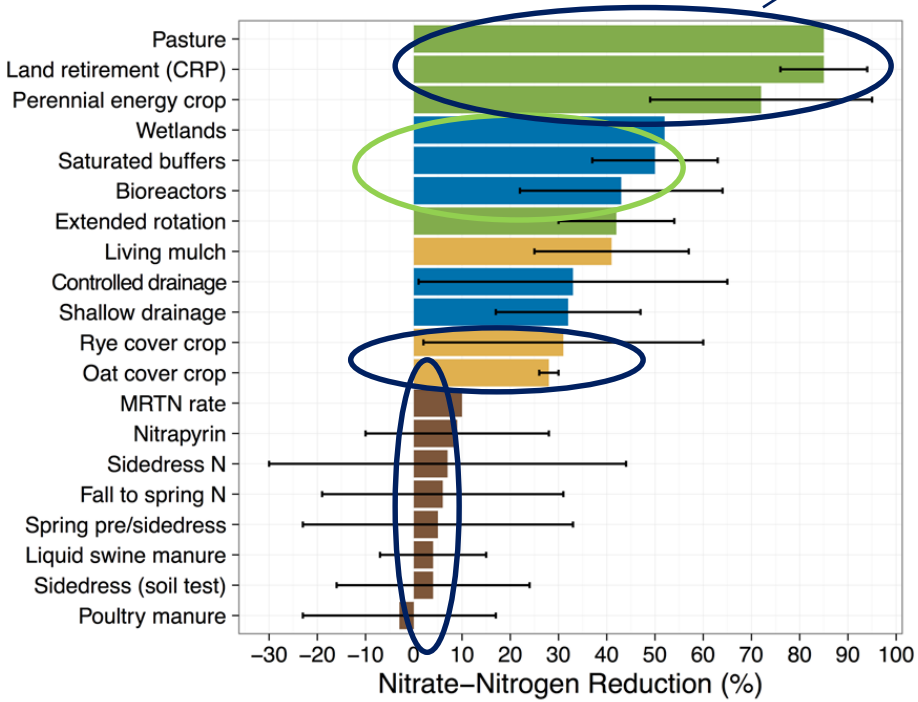
Practice	1980	2010	2016	Gain	% Increase
Ponds	35	59	67	32	91%
Terraces	96	232	319	223	232%
WASCOBs	48	479	780	732	1525%
Grassed Waterways	308	869	1064	756	245%
Contour Buffers	0	8	7	-1	NA
Stripcropping	NA	None	0	NA	NA

Conservation Practices
a comparison

CRP Acres Summary

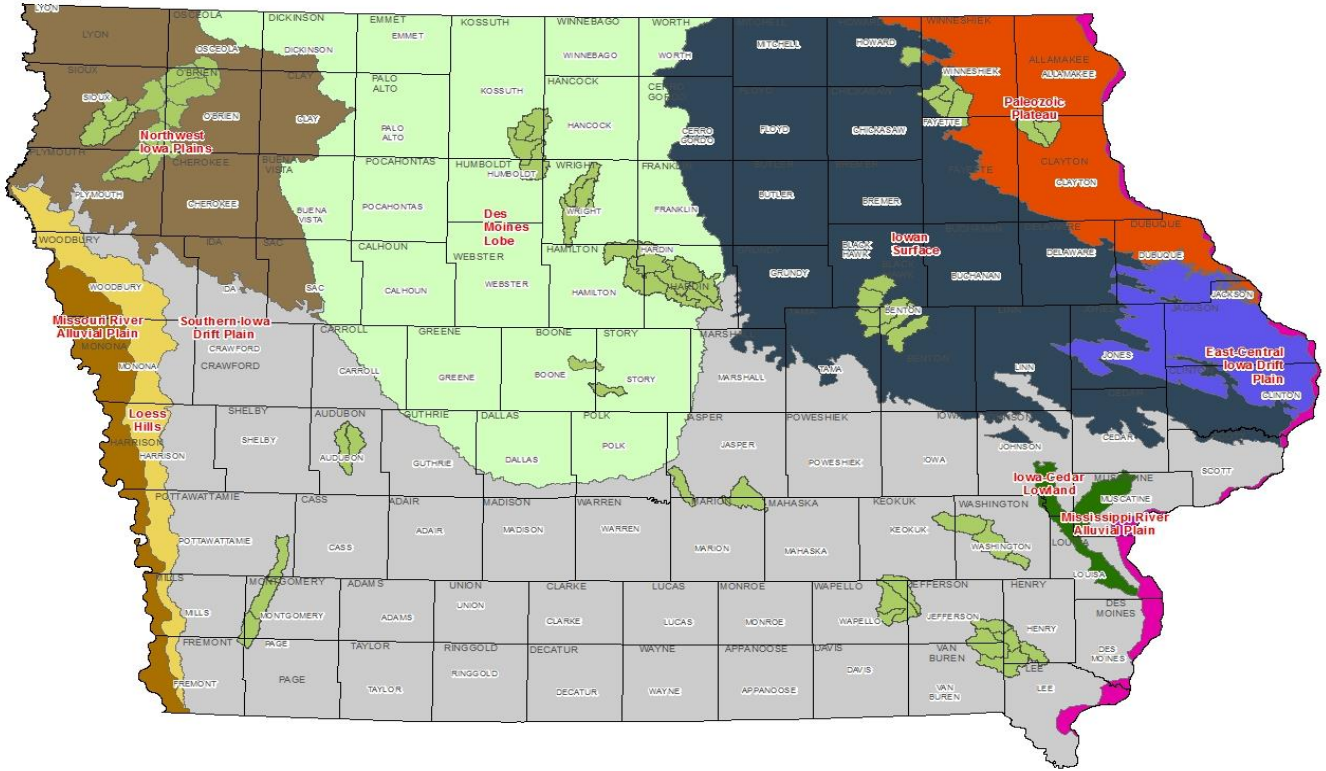


~1.6M acres
~$250M investment



Source: Iowa Soybean Association/INRS Data Assessment

Differences in Land Forms



Edge-of-Field (EOF)

Bioreactors are lined pits filled with woodchips; tile drainage water flows through and denitrifying bacteria converts nitrate into di-nitrogen gas.

One bioreactor can treat up to 100 acres of tile-drained land.

Source: CleanWaterIowa.org

Edge-of-Field (EOF)

Saturated Buffers are lateral tile systems that re-distribute tile drainage water through the streamside buffer to denitrify and facilitate plant uptake before reaching the stream

One saturated buffer can treat up to 100 acres of tile-drained land.

Edge-of-Field (EOF)

Wetlands are strategically located and designed to remove nitrate from tile-drainage water from cropland areas.

The larger the wetland, the greater the percentage of N removal; nitrate concentration reduction averages 52%. Wetlands also provide improved aesthetics and Iowa game and waterfowl habitat.

Source: CleanWaterIowa.org

Technical Assistance

EOF (wetlands, bioreactors, DWM, saturated buffers)

Technical Assistance Opportunities:

- NRCS staff (technicians, CETs, engineers, etc.) – 1st option

Other options:

- IDALS procured technical assistance – ISG and ISA/ESE
  - Wetlands, bioreactors, sat. buffers only.
- Subcontract with project or partner funding
- ISU or other project
- Hybrid approach

Technical Assistance

EOF (wetlands, bioreactors, saturated buffers)

IDALS Technical Assistance Process:

- PC/FO staff – assess potential viable site (ACPF/Sat. Buffer Statewide tool, Project Monitoring, LO interest, Drainage Contractor partnership, etc.)
- EOF request form – preliminary information to help facilitate analysis
  - More info from potential site the better (tile maps, outlet size, ws area, buffer size, buffer program, etc.)
- Send to IDALS, IDALS contacts to contractor, contractor completes the necessary phases. Ability to offer services from assessment/feasibility through construction and checkout.
- Cultural resources/NEPA compliance
- No conservation planning, funding or programmatic work as part of this agreement and will be up to the FO/PCs to facilitate this portion.
- Key deliverable is viable, ready to build practices to access funding (if necessary) for construction.

Financial Assistance

EOF (wetlands, bioreactors, DWM, saturated buffers)

Financial Assistance Opportunities:

- NRCS funding
  - *EQIP (normal, RCPP, etc.)*
- FSA funding
  - *CRP (CLEAR, CP-39/23, etc.)*
- WQI funding (including other non-federal partner funding)
  - *Saturated Buffers, Bioreactors, Wetlands*
- CREP
  - *Wetlands*
- SRF and/or Sponsored Projects

Financial Assistance Navigation

EOF (wetlands, bioreactors, DWM, saturated buffers)

Turn-key as possible is key.

Practice considerations:

- Balance landowner objects, maintenance, costs, etc.
  - *Saturated buffers vs. bioreactors*

Financial Assistance Variables to Consider:

- EQIP cannot overlap CRP funding without impacting CRP contract
- EQIP can c/s constructed wetlands, but limited use to date.
- CRP c/s is structured as 50% c/s + PIP (capped at $1500)
  - *So $10k bioreactor = $6500 in total c/s max*
- CRP saturated buffer limitations depending on contract and source
- WQI funding capped at 50% currently, can pair w/ fed/other $
  - *Federal program funds first, WQI comes on top, if necessary*
- CREP limited to 37 counties and state approp. - Can utilize other $ to match CRP portion
- CRP acreage cap – wetlands, buffers, other EOF.
- Federal program funding requires NRCS review of designs from outside entities.
- SRF and/or Sponsored Projects – requires additional steps and coordination

ADDITIONAL INFORMATION

www.nutrientstrategy.iastate.edu

www.CleanWaterIowa.org

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