

Wetlands

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

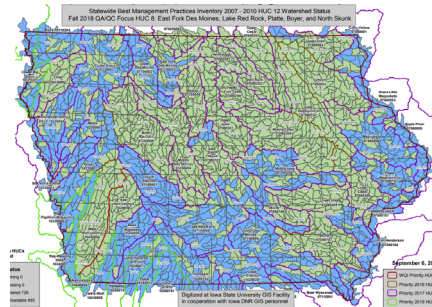
The larger the wetland, the greater the percentage of N removal; nitrate concentration reduction averages 52%. Wetlands also provide improved habitat for Iowa wildlife.



Source: CleanWaterIowa.org

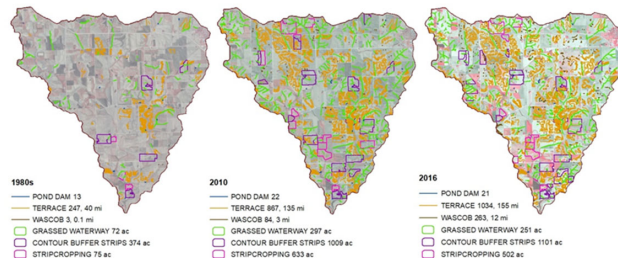
BMP Mapping

- Select BMPs identifiable w/ available data
- 2007-2010 Benchmark
- Documentation
- Historical
- WS Modeling



Statewide Practice Summary			
Pond Dams (number)	Grassed waterways (ac)	Terraces (ft)	WASCOBs (number)
114,423	327,904	469,257,556	246,139

Estimated >\$6B in investment based on today's costs.



Learn more at <https://www.gis.iastate.edu/gisf/projects/conservation-practices>

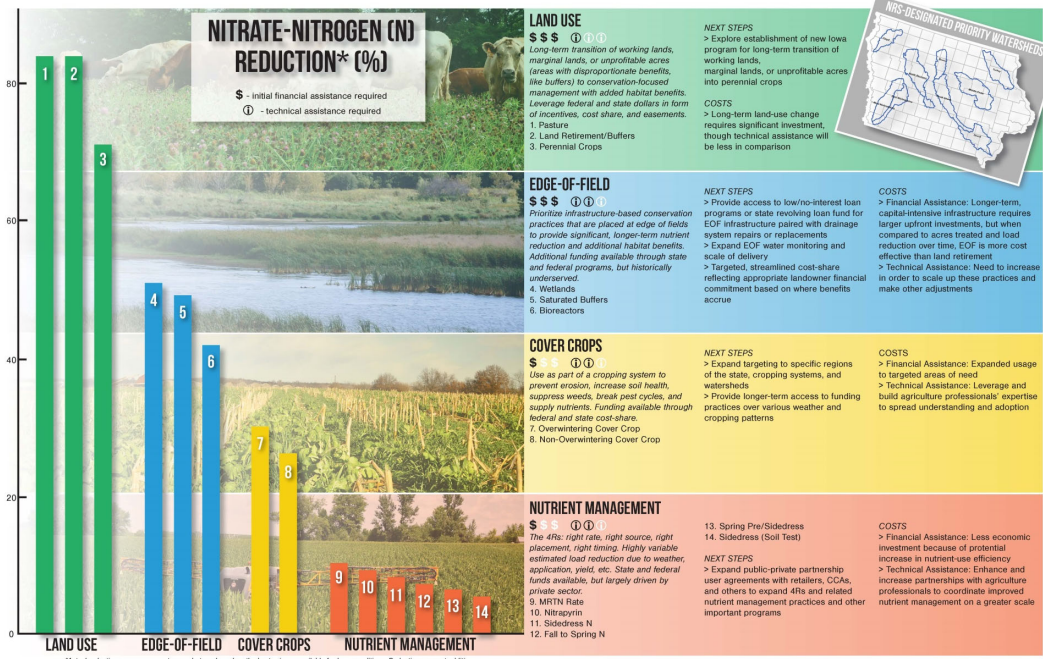
Updated Baseline Assessment

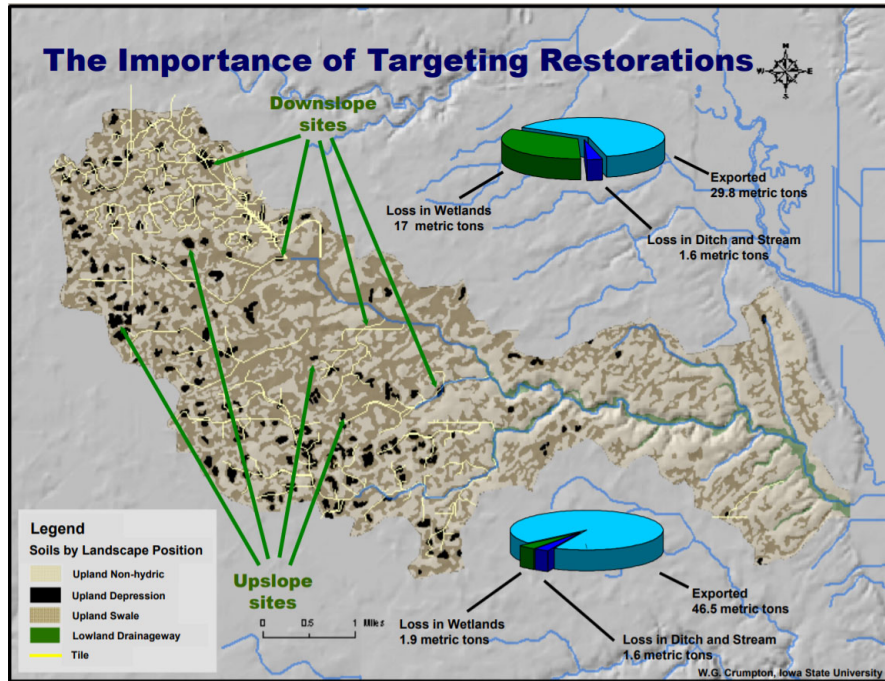
- **NPS**
- Historical progress on P loss from cropland
- Nitrogen needs more emphasis



		1980-96 Baseline Load (tons)	2006-10 Benchmark Load (tons)	Change, 1980-96 to 2006-10		Major cause of change
Nitrogen	NPS	278,852*	293,395	5.2%	Increase	Land use change Flow increase
	PS	13,170	14,054	6.7%	Increase	
	Total	292,022	307,449	5.3%	Increase	
Phosphorus	NPS	21,436	16,800	21.6%	Decrease	Reduced tillage and soil test P Flow increase
	PS	2,386	2,623	9.9%	Increase	
	Total	23,822	19,423	18.5%	Decrease	

*The method used to derive the total nitrogen estimate of 292,022 tons indirectly reflected the point source contributions.



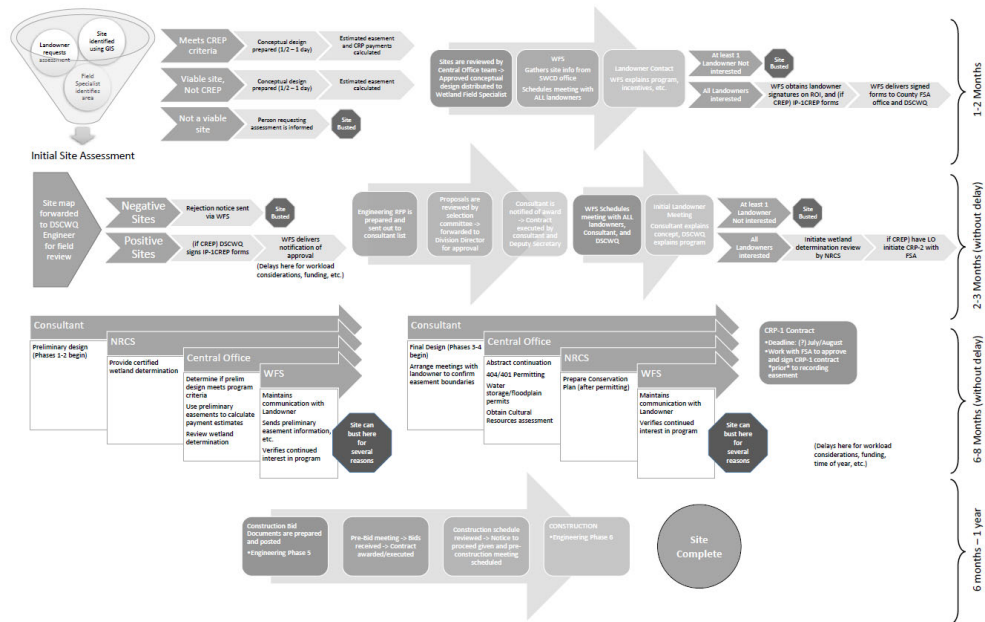


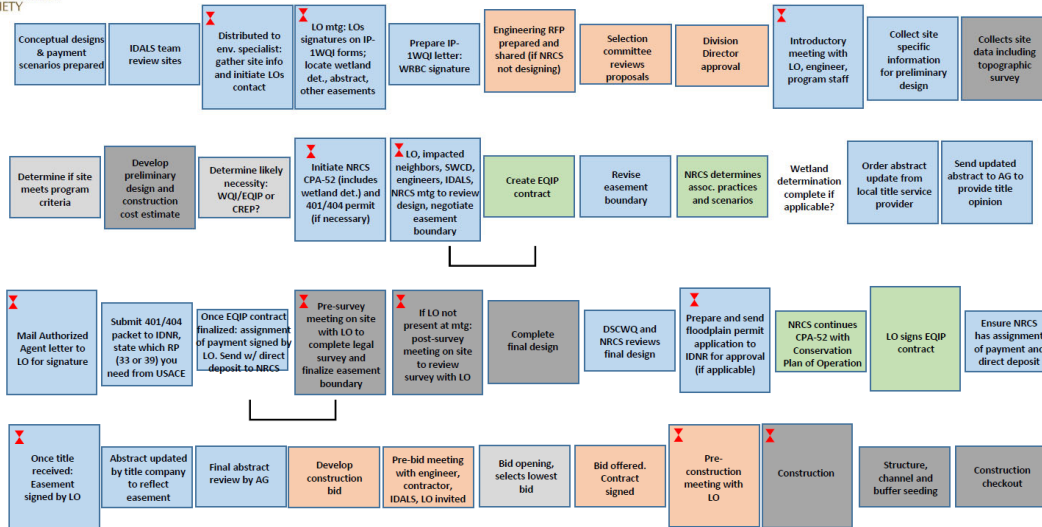
Program options

- Iowa CREP – limited to 37 counties
- NRCS-EQIP – RCPP/MRBI
- WQI (IDALS)
- CRP – CP-39
- EPA – Gulf of Mexico Program Funding
- Private funding – DU, IPPA, TNC, etc.
- Others

*Often combine these sources to support projects and provide full funding package to landowners.

Typical timeframe is 18-24 months from interest to construction completion (experience w/ CREP).





Wetland Opportunities and Challenges

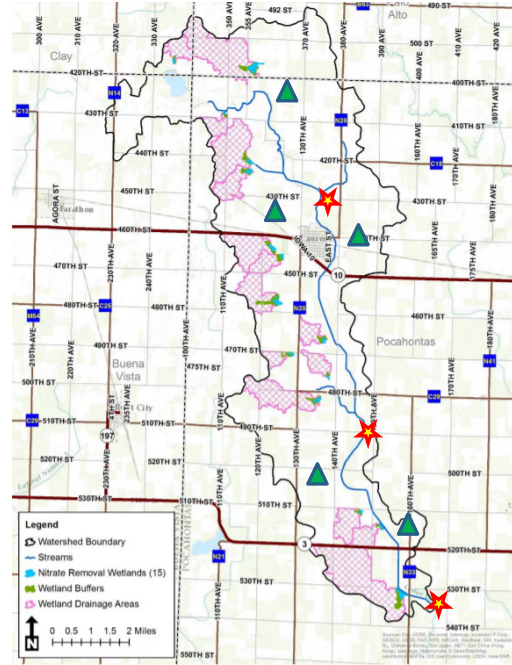
options

- Breakpoint (traditional)
- Created/Excavated or “Tile Zone”
- Floodplain
- Build off of current understanding from monitoring existing sites translated to new site concepts
- Pros and cons to navigate through all of these types of sites:
 - Advantages: costs (easements, construction, etc.), improved performance, habitat value
 - Challenges: permitting, costs, private landowners, time
- Focus on expanding opportunity, not one vs. the other

Wetland Opportunities and Challenges

options

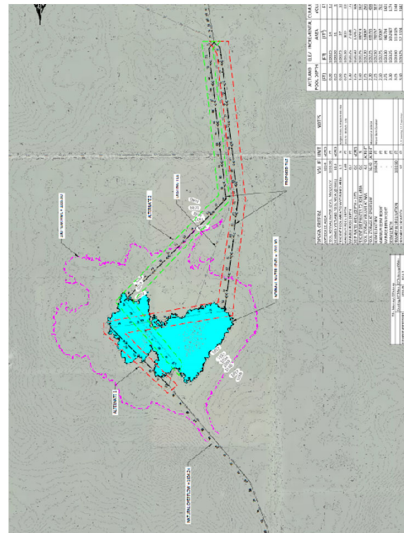
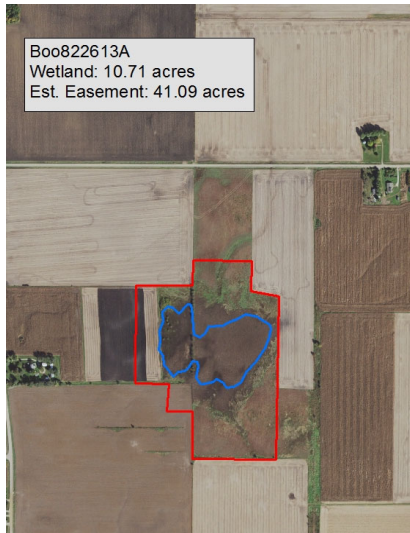
- Expands the number of sites feasible in the basin:
- Conceptual watershed
- 13 breakpoint sites
- + 5 potential TZ sites
- + 3 potential floodplain sites





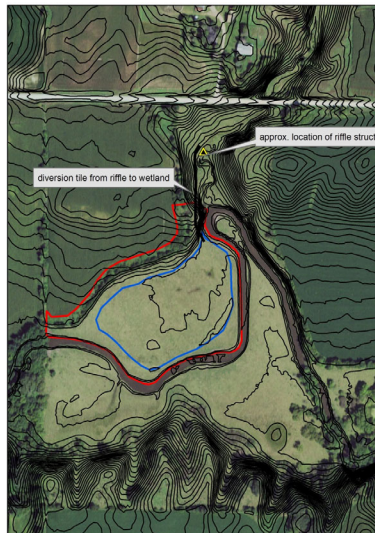
WQ Wetlands

Expanding Opportunities – "Tile Zone"



WQ Wetlands

Expanding Opportunities – “Floodplain” and “Created”



Expanded Capacity in Iowa to Advance Wetlands

- **Expanded Delivery Partnerships**
 - Ducks Unlimited
 - Iowa Nutrient Research and Education Council (INREC)
- **Expanded Funding Opportunities:**
 - Regional Conservation Partnership Program (RCPP) – Iowa Systems Approach to Conservation Drainage, Midwest Agriculture Water Quality Partnership Project, etc.
 - Mississippi River Basin Healthy Watersheds Initiative (MRBI)
 - Private sector (DU, TNC, IPPA, others)

