

WRCC Minutes- September 18, 2014

Called to order at 9:04 AM by Northey.

Introductions of WRCC and attendees- see checklist and sign-in for attendance- 41 in attendance total.

Opening remarks by Northey- highlighted rededication event at Lake Darling on 9/17. Well-attended. Highlighted conservation efforts at watershed level for success.

Nutrient Reduction Strategy Update-

Matt Lechtenberg gave IDALS update. Information provided on statewide WQI and adoption of those practices.

RCPA Application is in development currently- due October 2 to USDA-NRCS. We are working with demonstration projects to leverage our funds with federal resources.

We are also part of a 5-state proposal being developed by UMRBA to implement our NRS with focus on statewide WQI practices.

Adkins comment- Make sure we are getting information to State Conservationist in order to get support letters.

Q: Is funding requested coming from NRCS? A: Yes- Northey gave information on pre-application and full applications. Adkins- pre-proposals 600 applications for \$2.6B. 250 invited to submit full proposals for about \$400 million. Information provided on different pools of funding (State, National, CCAs).

Hansen also provided information on the Middle Cedar proposal and the different pools of funding being pursued through WQI.

Lechtenberg provided an update on WQI demonstration projects and staffing/ramp-up efforts. Also gave information on practices within projects.

Bill Ehm, DNR gave update on point source component of NRS along with Adam Schnieders. A report on point source implementation has been distributed. 30 permits have been issued or closed and 9 more have been placed on public notice to develop NRS permits. Also updates on two entities that will no longer require NPDES permits and thus no nutrient reduction provisions to comply with.

Roger Bruner, DNR, provided information on nitrogen and phosphorus load calculations and modeling and progress on those activities. Goal to have update on 2012-13 estimates by end of the year.

Q: on permits. Answer- these permits are doing two years of monitoring.

Question from Osterberg on NRS report and nutrient removal goals of 75% and 66%- what do those mean? Answer- for these permits, using baseline technology 66% N reduction and 75% P reduction for point sources can be achieved efficiently using biological treatment at the point source.

Q: What percentage of overall 45% is achieved by this? Answer- 16% of P and 4% of N, leaving 29%P and 41%N for nonpoint to pick up. Clarification on who has these permits and what they are being required

to do regarding monitoring. Existing technology in larger plants is already removing N & P from wastewater in normal treatment processes. More discussion among panel on process by permit holders to remove nutrients and to meet goals specified and clarification on who is selected to get these permits.

Lawrence gave an ISU update on the NRS. The NRC has announced funding for 10 new projects totaling \$1.3 million. Project descriptions will be posted online. Types of projects vary and include modeling, analysis of trading, ephemeral gullies, remote sensing, tillage and cover crops, stacking practices and the impact of that, seed mixes for perennial grasses that control N loss, and others. 3rd Quarter progress reports on the first 10 projects are also available online.

Measures committee is working with J Arbuckle to analyze social aspects of farmer knowledge and behavior as it relates to conservation and nutrient reduction efforts. Planning to oversample in priority watersheds to make sure good information is obtained.

Northey commented on Hypoxia Task Force efforts to develop consistent, uniform measures and progress of that for group as a whole and within states. Key challenges are capturing non-subsidized, non-structural measures and developing a science-based model for aggregating N & P reduction throughout the area.

Q: Can we get a report on the model being used by the Hypoxia Task Force? A: We will send it to the Measures Subcommittee.

Lechtenberg discussed the final Nutrient Reduction Strategy Progress Report, which was distributed to the WRCC in advance of the meeting. Some comments were received and the draft report is now considered final for purposes on reporting progress. Discussion from DNR on point source progress and how many projects are in progress. Matt then discussed progress on implementation of practices, limitations on data collection, and report that science assessment and available data shows load reduction of 1.9 million pounds from cover crops alone. Schnieders discussed challenge of estimating/modeling P load reductions. Appendix includes discussion on progress toward implementation by Farm Bureau, who provided information during draft phase.

Adkins discussed meeting with us to figure out how to get data from NRCS in order to track progress.

Discussion was held regarding inclusion of appendix data from Farm Bureau. Matt responded that they were the only ones to provide information during comment period which was discussed at the last WRCC meeting on July 29, 2014. The comment period ran from July 29th until August 22, 2014 and included WRCC and WPAC members. Jen Terry, IEC asked about inclusion of WPAC comments submitted to measures subcommittee.

Osterberg commented on percentage of acres managed versus number of acres treated. Should we mention that as well? Response is that we can acknowledge limitation on overall coverage to provide context, but will also frame that context in terms of what data we have versus what is actually being done.

Kinman asked that the report include follow-up adoption of management practices. Northey and Hansen provided information on current survey efforts.

Comment was made (*by Dan at the table*) on challenge of determining true baseline and tracking all of management practices that are already in place, particularly what is done without cost-share. Response from Osterberg is to put report in greater context.

Comment by Osterberg that second paragraph of second bullet on page 8 does not have any context. Why not include discussion of how much you have spent on conservation from the Rural Life Poll conducted by ISU? Would like to see more discussion on what is not being done, not just on what is being done.

Final suggestion by Osterberg is to provide context on overall landscape of progress on nutrient reduction, discussing measures in context of overall picture.

Osterberg also mentioned discussion of funding and the money that was approved by Legislature but vetoed. Progress report should highlight the need for additional resources and help to build the case for the Legislature to add more funding. Report should include this. Reply from Bill that our report is about what did happen and not so much about what did not happen.

Question from Lorenzen that we show specifically the budget for strategy implementation. What is included in that number? Response from Northey about what should we count? Is it just projects or internal admin? He referenced a number of \$54 million. If we have that number, what is the number that we used for it?

Osterberg commented on his report on Bear Creek in Winneshiek County and how that project quantified investment by the state and the other partners. Back to context of what the numbers indicate.

Northey summarized that the report challenge is that numbers reported are both accurate and inclusive.

Question: What is the outcome of this report? Answer: We will continue to solicit comments on an ongoing basis. Anyone will be able to comment through the same site where the Nutrient Reduction Strategy is housed. Gillespie commented on our charge to report on accomplishments, not on unmet demand. We can show backlogs where appropriate but don't have a true handle on unmet demand.

Conclusion is that future reports will include more information as it becomes available. Additional comments submitted to WPAC will be included in the appendix to the report. Group encouraged to participate in providing comments in a timely manner going forward.

Iowa-Cedar River Project Report

Michael Tarpey and Jason Smith with USACE gave a presentation on a proposal to conduct a study on the IA-Cedar Watershed. USACE is seeking a letter of intent for a feasibility study which would lead to a cost-sharing agreement to do an Iowa-Cedar feasibility study.

Questions were asked about value added to existing work, how the funding arrangement would work, and who makes decisions ultimately. Discussion was also held on where non-federal funding would come from, both in terms of time and money. Finally, who from the state has authorization to provide this support? Who can sign a letter of intent and negotiate a scope of work?

We have a handout with a PowerPoint from USACE.

WPAC Update

Kinman provided the WPAC update. The next WPAC meeting is Friday, September 26th at ICGA in Johnston. WQI and WMAs will be talking to the group.

Other Topics

Sean McMahon introduced himself as director of the new Iowa Ag Water Alliance. It is funded by Corn, Pork, and Soybean using check off funds- \$200K per year/per group for at least five years. Charge of IAWA is to accelerate implementation of INRS statewide. Question from Northey on how IAWA will implement. Answer is they will meet with producers and work to access additional funding from corporations, foundations, etc. Intent is not to put a lot of staff or their own funding directly into practices.

Kraig McPeck with US Fish and Wildlife gave an update on their state and local partnership efforts.

Northey commented that the Hypoxia Task Force will convene in Alton, IL from October 20-22. There is a public listening session on October 21. He also provided an update on the change in the task force co-chair with EPA (Ellen Gilinski).

Application rates on fertilizer were discussed by Delaney. Wondered where the high concentrations are coming from this time of year. Would like to see us engage more with producers on optimal application rates.

Weber commented that the director of the National Weather Service will be at the Iowa Flood Center on October 15-16. More details will be forthcoming.

The next meeting will be held on November 14, 2014 at the Urbandale Public Library, beginning at 9:00 AM.

The meeting was adjourned at 12:22 PM.

Water Resources Coordinating Council

Thursday September 18, 2014

9:00-11:30 AM

Iowa State Capitol – Room 103

WRCC Website: <http://www.agriculture.state.ia.us/WRCC.asp>

AGENDA

Welcome & Introductions

Iowa Nutrient Reduction Strategy Update (IDALS/ISU/DNR)

Iowa-Cedar River Project Report (Corps)

WPAC Update

Other Topics

Future Meeting Dates/Locations

- **November 14, 2014 – 9:00-11:30am @ Urbandale Public Library**

Public Comments (Please contain comment length to 3 minutes per person)

Adjourn

Water Resources Coordinating Council

| WRCC Representative | Position | Organization |
|---|--|--|
| <input checked="" type="checkbox"/> 1 Bill Northey | Secretary (WRCC Chair) | Iowa Department of Agriculture & Land Stewardship |
| <input type="checkbox"/> 2 Terry Branstad <input checked="" type="checkbox"/> Julie Vande Hoef | Governor Designee | Governor's Office Governor's Office |
| <input type="checkbox"/> 3 Chuck Gipp <input type="checkbox"/> Bruce Trautman <input checked="" type="checkbox"/> Bill Ehm | Director Designee Designee | Iowa Department of Natural Resources Iowa Department of Natural Resources Iowa Department of Natural Resources |
| <input checked="" type="checkbox"/> 4 Jim Gillespie <input checked="" type="checkbox"/> Jake Hansen | Director Designee | IDALS - Division of Soil Conservation IDALS - Division of Soil Conservation |
| <input type="checkbox"/> 5 Mariannette Miller-Meeks <input type="checkbox"/> Kenneth Sharp <input type="checkbox"/> Stu Schmitz | Director Designee Designee | IA Department of Public Health IA Department of Public Health IA Department of Public Health |
| <input type="checkbox"/> 6 Mark Schouten <input checked="" type="checkbox"/> John Benson | Administrator Designee | Iowa Homeland Security & Emergency Management Iowa Homeland Security & Emergency Management |
| <input type="checkbox"/> 7 Wendy Wintersteen <input checked="" type="checkbox"/> John Lawrence | Dean Designee | College of Agriculture and Life Sciences, ISU College of Agriculture and Life Sciences, ISU |
| <input type="checkbox"/> 8 Susan Curry <input checked="" type="checkbox"/> David Osterberg | Dean Designee | College of Public Health, University of Iowa College of Public Health, University of Iowa |
| <input type="checkbox"/> 9 Joel Haack <input type="checkbox"/> Maureen Clayton | Dean Designee | College of Humanities, Arts and Sciences, UNI College of Humanities, Arts and Sciences, UNI |
| <input checked="" type="checkbox"/> 10 Paul Trombino III <input type="checkbox"/> Scott Marler | Director Designee | Iowa Department of Transportation Iowa Department of Transportation |
| <input type="checkbox"/> 11 Debi Durham <input type="checkbox"/> Tim Whipple | Director Designee | Iowa Economic Development Authority Iowa Economic Development Authority |
| <input checked="" type="checkbox"/> 12 Dave Jamison <input type="checkbox"/> Lori Beary | Executive Director Designee | Iowa Finance Authority Iowa Finance Authority |
| <input checked="" type="checkbox"/> 13 Alec Scranton <input type="checkbox"/> Larry Weber | Dean Designee | College of Engineering, University of Iowa College of Engineering, University of Iowa |
| <input type="checkbox"/> 14 Kevin Richards ✓ <i>Jon Naniq</i> | Director | USGS, Iowa Water Science Center |
| <input type="checkbox"/> 15 Jay Mar <input checked="" type="checkbox"/> Marty Adkins | State Conservationist Designee | USDA, Natural Resources Conservation Service USDA, Natural Resources Conservation Service |
| <input type="checkbox"/> 16 John Whitaker | State Executive Director | USDA, Farm Services Agency |
| <input type="checkbox"/> 17 Bill Menner <input type="checkbox"/> Kate Sand | State Director Designee | USDA, Rural Development USDA, Rural Development |
| <input type="checkbox"/> 18 Karl Brooks ✓ <i>John Reyna</i> <input type="checkbox"/> Karen Flournoy <input type="checkbox"/> Damon Frizzell | Regional Administrator Designee Designee | EPA-Region 7 EPA-Region 7 EPA-Region 7 |
| <input checked="" type="checkbox"/> 19 Colonel Mark Deschenes <input type="checkbox"/> Diane Karnish | Rock Island District Commander Designee | US Army Corps of Engineers Rock Island District US Army Corps of Engineers Rock Island District |

WRCC Public Attendance Sign-In Sheet

9-18-14

(Public comments will be accepted at specified time on agenda)

| | Name | Affiliation | Have Comments (Y/N) |
|----|----------------------|--------------------------------------|---------------------|
| 1 | Shawn Richmond | IDALS | N |
| 2 | Mike Delaney | Ikes | N |
| 3 | Mary Braun | House Democratic Research Staff | N |
| 4 | Jerry Neppel | IDALS | N |
| 5 | JOHN MORELAND | SENATOR HARTWIG | N |
| 6 | Kraig McPeck | U.S. Fish & Wildlife Service | N |
| 7 | Bob Clevensine | USFWS Refuges | N |
| 8 | Sean McMAHON | IOWA AG WATER ALLIANCE | N |
| 9 | Kristin Achenbrenner | The Nature Conservancy | N |
| 10 | Jan Glendening | The Nature Conservancy | N |
| 11 | Ben Gleason | Iowa Corn Growers Assn | N |
| 12 | Jennifer Terry | IA Environmental Council | ? |
| 13 | Kathy Norton | US Army Corps of Engineers | N |
| 14 | Dustin Miller | Iowa League of Cities | N |
| 15 | Brett Lorenzen | Environmental Working Group | N |
| 16 | Linda Korman | IAWA - DMWU | N |
| 17 | Jason Smith | U.S. Army Corps of Engineers | N |
| 18 | Michael Tarpey | US Army Corps of Engineers | N |
| 19 | John Reyna | U.S. EPA | N |
| 20 | Lori Beany | Iowa Finance Authority - SRF | N |
| 21 | John Benson | IA Homeland Security Emergency Mgmt. | N |
| 22 | Dan Zumbach | IA Senate (SD48) | Y |
| 23 | Marty Atkins | USDA - NRCS | N |
| 24 | Adam Schwabers | IDNR | N |
| 25 | Bill Ehm | IDNR | N |
| 26 | Jim Gillespie | IDALS - DSC | N |
| 27 | Matt Leckfueberg | IDALS - DSC | N |
| 28 | Eric Wiklund | IDNR | N |
| 29 | Roger Bruner | IDNR | N |
| 30 | Allan Bonini | IDNR | N |
| 31 | Duskozel | LSP | N |
| 32 | Julie Vandelhoef | Governors office | N |
| 33 | Jon Nania | USGS | N |
| 34 | Lenny Weber | IHR / Univ. of Iowa | N |
| 35 | Scott Marler | Iowa DOT | N |

WRCC Public Attendance Sign-In Sheet

9-18-14

(Public comments will be accepted at specified time on agenda)

| | Name | Affiliation | Have Comments (Y/N) |
|----|-----------------|------------------------------------|---------------------|
| 36 | David Osterberg | University of Iowa - Public Health | |
| 37 | John Lawrence | Iowa State University | |
| 38 | John Lawrence | IDALS - DSC | N |
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Point Source Nutrient Reduction Strategy Report

WRCC – September 2014

The IDNR will track progress for implementing the point source nutrient reduction strategy using several measures:

- 1) Number of permits issued that require nutrient reduction feasibility studies

Status: The following permits have been issued or put on public notice:

Permits Issued/Closed

| | Facility | Permit Issued | Status |
|----|--|---------------|--|
| 1 | Dairiconcepts, L.P. – Allerton, IA | 9/1/2013 | |
| 2 | City of Grinnell | 9/1/2013 | |
| 3 | Rembrandt Enterprises – Thompson, IA | 9/1/2013 | |
| 4 | City of West Liberty | 9/1/2013 | |
| 5 | City of Dubuque | 10/1/2013 | |
| 6 | City of Harlan | 10/1/2013 | |
| 7 | Tyson Foods – Perry, IA | 11/1/2013 | |
| 8 | City of Atlantic | 12/1/2013 | |
| 9 | City of Eldridge | 12/1/2013 | Amended permit to include construction of nutrient removal |
| 10 | Manindra Milling Corporation – Hamburg, IA | 12/1/2013 | |
| 11 | Oakland Foods LLC – Oakland, IA | 12/1/2013 | |
| 12 | City of Grundy Center | 2/1/2014 | |

| | | | |
|----|---|-----------|--|
| 13 | City of Mt. Pleasant | 2/1/2014 | Permit in process of being amended to include construction of nutrient removal |
| 14 | City of New Hampton | 4/1/2014 | |
| 15 | City of Boone | 5/1/2014 | |
| 16 | City of Cedar Falls | 5/1/2014 | |
| 17 | City of Iowa City | 5/1/2014 | Currently conducting total nitrogen removal |
| 18 | City of Red Oak | 5/1/2014 | |
| 19 | City of West Burlington | 5/1/2014 | |
| 20 | City of Winterset | 5/1/2014 | |
| 21 | Walter Scott, Jr. Energy Center | 5/14/2014 | |
| 22 | Swiss Valley Farms -- Luana, IA | 6/1/2014 | |
| 23 | Climax Molybdenum Company -- Fort Madison, IA | 7/1/2014 | |
| 24 | City of Waukee | 8/1/2014 | Scheduled to connect to Des Moines WRA by January 1, 2019 |
| 25 | City of Davenport | 8/1/2014 | |
| 26 | City of Charles City | 9/1/2014 | |
| 27 | City of Cherokee | 9/1/2014 | |
| 28 | City of Eldora | 9/1/2014 | |
| 29 | John Deere Dubuque Works | 9/1/2014 | |
| 30 | City of Ankeny | CLOSED | Facility connected to Des Moines WRA. NPDES permit closed on January 6, 2014 |

Permits on Public Notice

| | Facility | Status |
|---|-------------------------|-----------------|
| 1 | City of Fort Dodge | noticed 3/10/14 |
| 2 | City of Greenfield | noticed 7/14/14 |
| 3 | Iowa Fertilizer Company | noticed 8/28/14 |
| 4 | City of Muscatine | noticed 8/27/14 |
| 5 | City of Eagle Grove | noticed 7/31/14 |

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|---|-----------------|--|--------------------------|
| 6 | City of Newton | | noticed 6/25/14 |
| 7 | City of Oelwein | | noticed 9/8/14 |
| 8 | City of Anamosa | | noticed 7/17/14 |
| 9 | City of Adel | | will be issued 10/1/2014 |

| | Updates | Status |
|---|-------------------------|--|
| 1 | Sioux-Preme Packing Co. | Signed consent decree with AG. Must apply for a land application permit within 60 days. Once the land application permit is finalized there will be no more surface water discharges and the facility will be removed from the Nutrient Strategy list. |
| 2 | Twin Counties Dairy | This facility has closed for now. This facility may be removed from the Strategy if ownership informs DNR in writing that they no longer require a permit for industrial wastewater. |

If there are any questions on this report or suggestions for improvements, please contact Adam Schnieders at 515.281.7409 or adam.schnieders@dnr.iowa.gov.

Iowa Nutrient Reduction Strategy 2013-2014 Annual Progress Report

(From Strategy Release through May 30th, 2014)

The Nutrient Reduction Strategy Annual Progress Report is assigned to the Water Resources Coordinating Council and follows the Iowa Nutrient Reduction Strategy (NRS) (nutrientstrategy.iastate.edu) framework that is based on EPA recommendations provided in their March 16, 2001 memo, "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reduction." The annual report provides progress updates on point source and nonpoint source efforts related to the action items listed in the elements of the strategy and updates on implementation activities to achieve reductions in nitrogen and phosphorus loads.

Membership in the Water Resources Coordinating Council includes:

- Secretary of Agriculture, Chair
- Iowa Department of Agriculture and Land Stewardship (IDALS)
- Iowa Department of Natural Resources (DNR)
- Iowa Department of Public Health
- Homeland Security and Emergency Management Division
- Iowa State University (ISU)-College of Agriculture and Life Sciences
- University of Northern Iowa (UNI)-College of Natural Sciences
- Iowa Department of Transportation (DOT)
- Iowa Economic Development Authority (IEDA)
- Iowa Finance Authority (IFA)
- University of Iowa (UI)-College of Engineering
- United States Geologic Survey (USGS)
- USDA-Natural Resource Conservation Service (NRCS)
- USDA-Farm Service Agency (FSA)
- USDA-Rural Development (RD)
- US-Environmental Protection Agency (EPA)
- US-Army Corps of Engineers (USACE)

The WRCC established subcommittees to coordinate on specific items detailed in the Nutrient Reduction Strategy listed below:

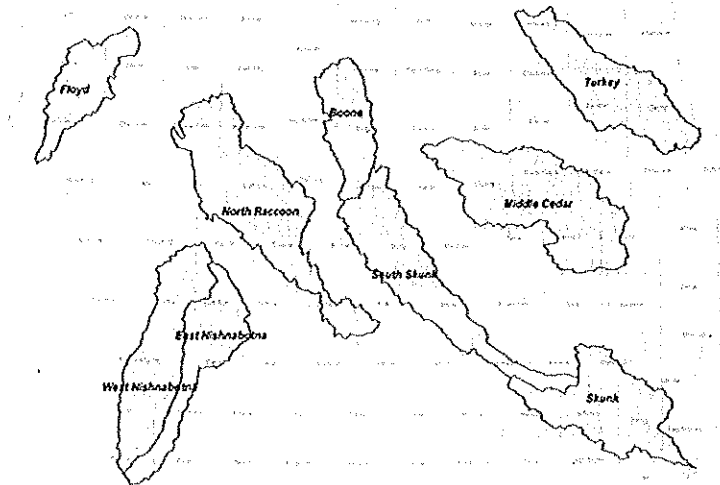
- Watershed Prioritization Working Group
 - WRCC members – IDALS, DNR, University of Iowa, and USDA-NRCS
 - WPAC Representative – Iowa Soybean Association, Iowa Farm Bureau (alternate)
- Measures Sub-Committee
 - WRCC members –ISU, IDALS, DNR, University of Iowa, USDA-NRCS, USDA-FSA, & USGS.

1.) Prioritization of Watersheds

The Nutrient Reduction Strategy (NRS) called for "identification of high priority watersheds within one year". This goal was achieved as nine priority HUC8 watersheds were designated through the WRCC in February of 2013. These priority watersheds were developed by a working group of the WRCC membership that included IDALS, DNR, NRCS, and the University of Iowa along with diverse private sector stakeholder input from cities, businesses, industries, utilities, environmental organizations, and agricultural organizations through the Watershed Planning Advisory Council (WPAC).

These watersheds were selected based on N & P loads and concentrations, presence of point sources, landform distribution throughout the state, and engagement of active, local groups within these watersheds.

WRCC Priority HUC8 Watersheds

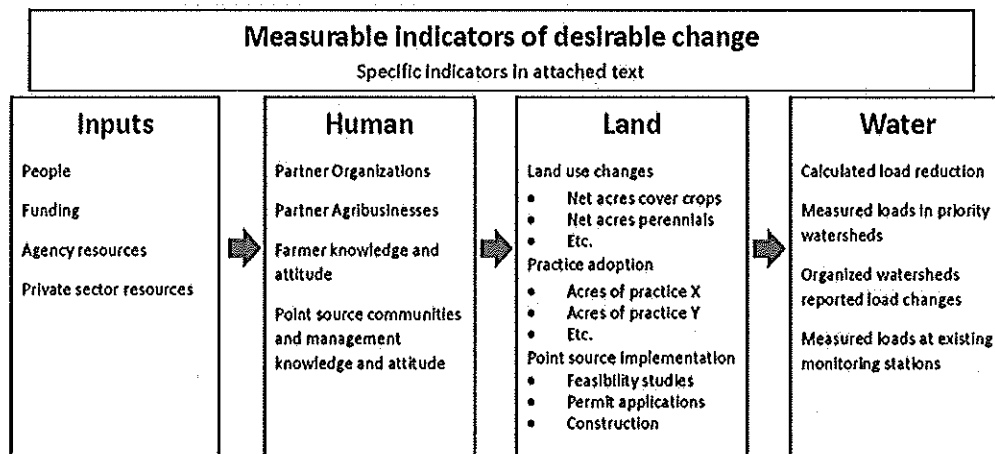


- 1.) Boone
- 2.) East Nishnabotna
- 3.) West Nishnabotna
- 4.) Floyd
- 5.) South Skunk
- 6.) Middle Cedar
- 7.) North Raccoon
- 8.) Skunk
- 9.) Turkey

2.) Determine Watershed Goals

The Water Resources Coordinating Council (WRCC) established the Measures of Success subcommittee to develop a list of measures to help document and track the progress of water quality improvements in Iowa. When finalized, these indicators should have the ability to be aggregated at a watershed and state scale to evaluate cumulative impacts and trends.

The Measures of Success Subcommittee has held four meetings between September and July, but has not finalized full recommendations to the WRCC yet. Information provided in this report is based on a summary of these meetings. The basis of these meetings has revolved around developing a framework to track changes as part of a “logic model”. By employing the logic model, multiple indicators can be tracked over time to determine progress being made toward the final goal of reducing nutrient loading and improve water quality. See diagram below.



The logic model basis starts with Inputs. Inputs can be funding, people, and other investments that influence changes in behavior. The next category is the Human element. What are individuals, agencies, businesses, organizations, etc doing to advance the Iowa NRS? How many people, acres or municipalities do they influence? How are these efforts being received by the public, etc? The third category is the Land and treatment facilities. What impact are the first two categories having on changes in the land in the adoption of practices to achieve nutrient reductions? Are permitted facilities progressing toward upgrades? The final category is Water. Are there changes in nutrient loads statewide or in priority watersheds? Following the logic model, the first three elements are needed before there are actual changes in the water. By collecting appropriate data on all 4 of these categories, the data can be analyzed to influence program development to ensure progress is moving forward to the ultimate goal.

3.) Ensure Effectiveness of Point Source Permits

- Number of permits issued that require nutrient reduction feasibility studies

The NRS was released in May 2013. One of the goals of the point source component was to issue 20 NPDES permits for facilities listed in the NRS that included the feasibility study requirement within the first year of the Strategy. As of May 31, 2014, 21 permits were issued with the feasibility study requirement included. (see table below). There are currently 147 facilities included in the Strategy. The intent is to reissue approximately 20 permits per year that include the feasibility study with the

expectation that after seven years all Major facilities will be reissued with the feasibility study provisions included.

| | Facility | Issued |
|-----|--|-----------|
| 1. | Dairiconcepts, L.P. – Allerton, IA | 9/1/2013 |
| 2. | City of Grinnell | 9/1/2013 |
| 3. | Rembrandt Enterprises – Thompson, IA | 9/1/2013 |
| 4. | City of West Liberty | 9/1/2013 |
| 5. | City of Dubuque | 10/1/2013 |
| 6. | City of Harlan | 10/1/2013 |
| 7. | Tyson Foods – Perry, IA | 11/1/2013 |
| 8. | City of Atlantic | 12/1/2013 |
| 9. | City of Eldridge | 12/1/2013 |
| 10. | Manildra Milling Corporation – Hamburg, IA | 12/1/2013 |
| 11. | Oakland Foods LLC – Oakland, IA | 12/1/2013 |
| 12. | City of Grundy Center | 2/1/2014 |
| 13. | City of Mt. Pleasant | 2/1/2014 |
| 14. | City of New Hampton | 4/1/2014 |
| 15. | City of Boone | 5/1/2014 |
| 16. | City of Cedar Falls | 5/1/2014 |
| 17. | City of Iowa City | 5/1/2014 |
| 18. | City of Red Oak | 5/1/2014 |
| 19. | City of West Burlington | 5/1/2014 |
| 20. | City of Winterset | 5/1/2014 |
| 21. | Walter Scott, Jr. Energy Center | 5/14/2014 |

There are 37 facilities identified in the nine priority watersheds. Of those, 33 were expired and eligible for reissuance. Of those permits nine (9) have been reissued and include the feasibility study.

- Number of nutrient reduction feasibility studies submitted

The primary goal of the Strategy is to reduce the amount of total nitrogen (TN) and total phosphorus (TP) discharged from point sources by 66% and 75%, respectively. The feasibility study requires a facility to monitoring influent and effluent flows for TN and TP during a 2-year period. At the end of that 2-year period, the facility is required to submit a report that evaluates the feasibility and reasonableness of reducing the amounts of nitrogen and phosphorus discharged into surface water. The report will include an evaluation of operational changes to the existing treatment facility that could be implemented to reduce the TN and TP discharged. If the implementation of operational changes cannot achieve the desired goals for reduction of TN and TP, the facility will evaluate new or additional treatment technologies that would achieve reductions in the amounts of TN and TP

discharged. The report will also include a proposed schedule for implementing the operational changes and/or installing new or additional treatment technologies to achieve the projected effluent quality attainable using the selected method(s).

The Department has not received nor expected any reports based on feasibility studies. The first permits with the feasibility study requirements were issued on September 1, 2013. **It is expected that the first reports will be submitted in mid to late 2015.**

- Number of permits amended with nutrient removal/reduction construction schedules

Once a facility has completed the feasibility study and submitted the report, the current NPDES permit will be amended to include a construction schedule for nutrient removal/reduction. The construction schedule will specify the timeframe and individual steps that the facility will take to implement nutrient removal/reduction. No permits have been amended to include construction schedules.

- Number of nutrient removal/reduction facilities in place/in design/under construction

While the Strategy itself has not yet directly resulted in implementation of point source nutrient reduction, some facilities in Iowa have voluntarily implemented nutrient removal. The City of Clinton constructed and is operating a new wastewater treatment plant in 2013 that removes nitrogen and phosphorus. Initial monitoring indicates that the facility is meeting the nutrient reduction goals of the Strategy. Iowa City and Sioux City are operating a new wastewater treatment plants that removes nitrogen. Phosphorus removal will be considered under their 2-year feasibility studies. We are aware of other wastewater treatment facilities that may remove nitrogen and phosphorus and will be looking to confirm this as we move forward.

- Number of facilities monitoring nutrient in their effluent

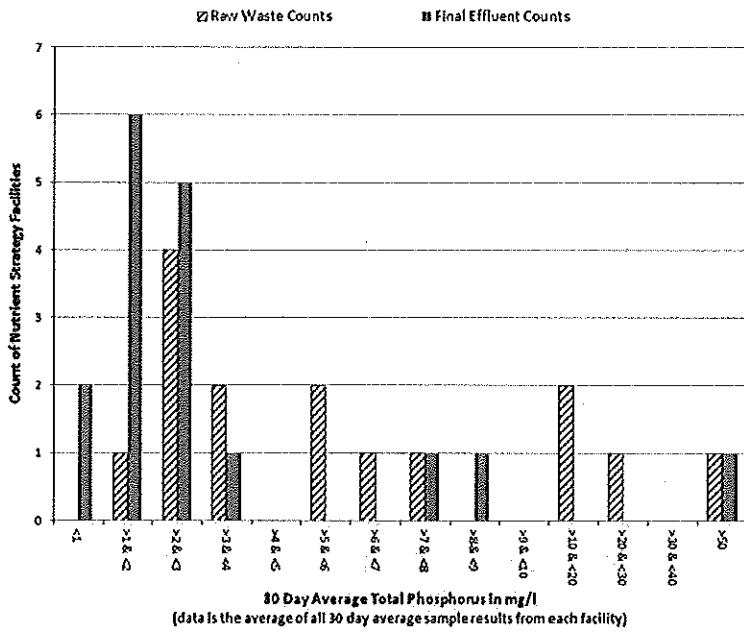
The Strategy calls for Major facilities to regularly monitor effluent TN and TP once per week. Currently, 22 facilities are monitoring their effluent based on the Strategy. This number will continue to grow as permits are reissued and nutrient monitoring requirements are added (20 permits/year). In addition to the nutrient monitoring requirements in the Strategy, facilities with a population equivalent (PE) greater than 3,001 are required by rule to monitor effluent for TN and TP (567 IAC Chapter 63 Table II). 147 additional facilities are monitoring for TN and TP outside of the Strategy requirements.

The City of Clinton has been removing nutrients since January 2013. Monitoring data demonstrates that they are removing 75% TN and 75% TP on average. Iowa City has a new WWTP that is designed for nitrogen removal. They have only one month to report at this time and are showing 72% nitrogen removal.

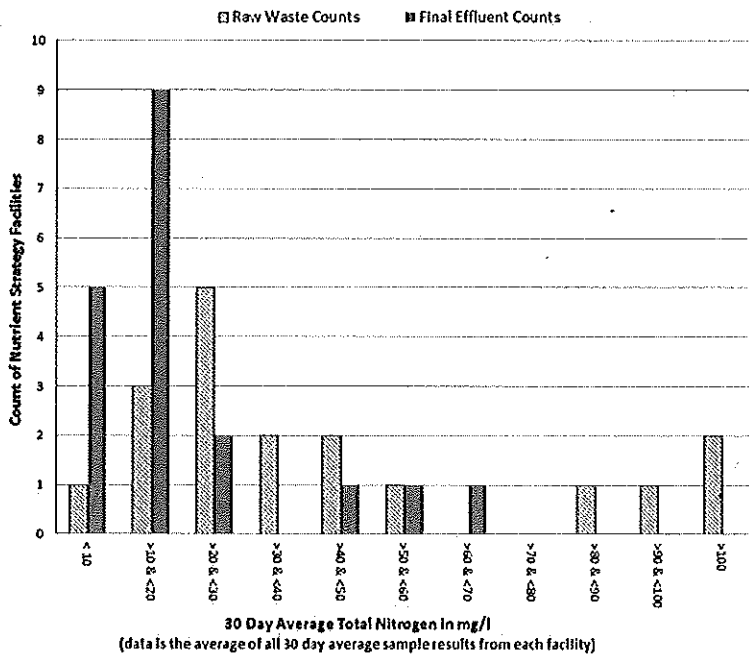
- Total nitrogen and phosphorus loads discharged from point sources

It is assumed that typical municipal wastewater effluent contains 25 mg/L of TN and 4 mg/L of TP. The Strategy is targeting effluent concentrations of 10 mg/L TN and 1 mg/L TP for facilities that are actively removing nutrient from the waste stream. Current available monitoring data is only available from a small number of facilities and represents only a small portion of the "total" nitrogen and phosphorus loads discharged from point sources. Based on the limited data received so far the assumptions used to estimate effluent concentrations of TP and TN was accurate in some cases and widely variable in others. Therefore we'll continue to utilize the assumptions used during strategy development until we have more data and are better able to quantify nutrient loads from point sources. Below are two tables summarizing the data received to date for influent and effluent concentrations for TP and TN for facilities permitted with the nutrient strategy provisions.

**Total Phosphorus Raw Waste and Final Effluent Averages -
Count of Nutrient Strategy Facilities Utilizing 30 Day Averages**



**Total Nitrogen Raw Waste and Final Effluent Averages -
Count of Nutrient Strategy Facilities Utilizing 30 Day Averages**



4.) Agricultural Areas

- Focus Conservation Programs

The Iowa Water Quality Initiative was established during the 2013 legislative session to assist the implementation of the Nutrient Reduction Strategy (NRS). The WQI seeks to harness the collective ability of both private and public resources and organizations to deliver a clear and consistent message to the agricultural community to reduce nutrient loss and improve water quality. Significant investments have been and continue to be made on reducing nutrients lost from non-point sources by both private and publicly funded programs. It's important to note that in addition to the level of public funding utilized to install practices, these funds leverage 50% or more of the cost from private landowners and producers.

- Water Quality Initiative (Statewide)

In August of 2013, \$2.8 million was made available through all 100 Soil and Water Conservation Districts to help implement conservation practices through the Water Quality Initiative (WQI). After an initial \$1.8 million was offered and subsequently obligated in less than a week, a supplement of \$1 million was added to the fund and this additional funding spoken for within another week.

The strong level of commitment showcased by Iowa farmers volunteering to try something new on their farms to help water quality is a testament to the level of engagement farmers are ready to take on these issues.

The practices offered through the WQI Statewide initiatives were selected because of their ability to be implemented in a short time frame and thereby providing a water quality benefit in 2013 and spring of 2014. The statewide approach gave farmers an opportunity to try these practices for the first time. Offering a portion of WQI funding statewide allowed each county to participate. This funding, along with a targeted approach, engaged more farmers and landowners in the process. Final totals of established practices through the WQI Statewide cost-share program was over 94,880 acres of cover crops, 1,020 acres of No-till/Strip-till, and 4,279 acres of N inhibitor.

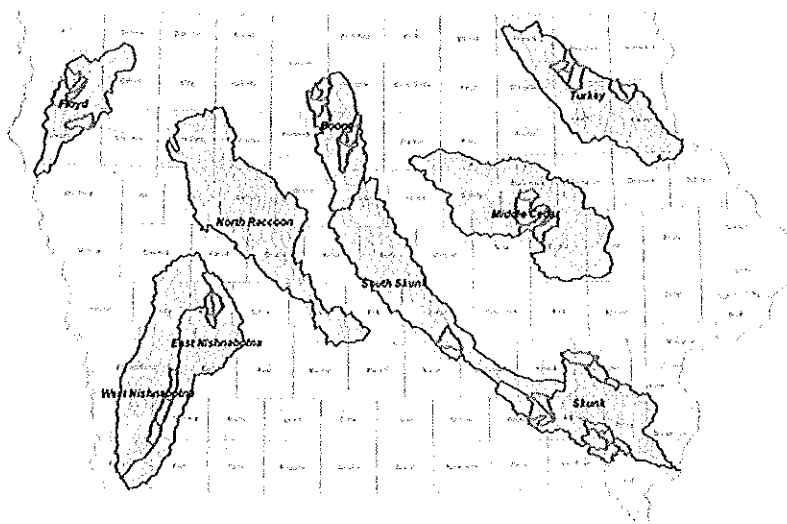
- Small Watershed Demonstration Projects

The Iowa Department of Agriculture and Land Stewardship (IDALS) issued two requests for applications (RFA) in FY2014 to provide funding for targeted watershed demonstration projects. Applications for watershed demonstration projects located in the priority HUC8 watersheds designated through the WRCC.

The initial RFA was released in August of 2013 and the second in February 2014 for interested groups to establish targeted demonstration watershed projects. There are currently 13 active projects through these first two rounds of RFAs. The projects were awarded \$5.8M in state funding leveraging an additional \$12M in landowner and partner match. These projects are designed to help implement and

demonstrate the effectiveness and adaptability of a host of conservation practices highlighted in the NRS on a watershed scale.

WQI HUC12 Demonstration Projects-2014



| Project Name | Lead | HUC 8 WS |
|---|-----------------|------------------|
| Benton/Tama Nutrient Reduction Demonstration Project | Benton SWCD | Middle Cedar |
| Bluegrass & Crabapple - East Nishnabotna Watershed Projects | Audubon SWCD | East Nishnabotna |
| Boone River Watershed Nutrient Management Initiative | Wright SWCD | Boone |
| Cedar Creek Partnership Project | Wapello SWCD | Skunk |
| Central Turkey River Nutrient Reduction Demonstration Project | Winneshiek SWCD | Turkey |
| Deep Creek Water Quality Initiative Project | Plymouth SWCD | Floyd |
| Demonstration of Targeted Nutrient Reduction Systems for Clayton County | Clayton SWCD | Turkey |
| Lower Skunk Water Quality and Soil Health Initiative | Henry SWCD | Skunk |
| Miller Creek Water Quality Improvement Project | Black Hawk SWCD | Middle Cedar |
| Van Zante Creek Water Quality Improvement Project | Marion SWCD | South Skunk |
| Walnut Creek Watershed Project | Montgomery SWCD | West Nishnabotna |
| West Branch of the Floyd River Water Quality Initiative | Sioux SWCD | Floyd |
| West Fork Crooked Creek Water Quality and Soil Health Initiative | Washington SWCD | Skunk |

More than 70 partners from agriculture organizations, institutions of higher education, private industry, the local, state and federal government, and others, are working together on these projects with the Soil and Water Conservation Districts (SWCD) serving as the project leaders.

These projects will utilize the collective resources of their partners to demonstrate conservation practices paired with strong outreach and education components. This effort will promote increased awareness and adoption of available practices and technologies. Successful projects will serve as local and regional hubs for demonstrating practices and providing practice information to farmers, peer networks, and local communities.

To date, currently funded projects are administered by the local Soil and Water Conservation Districts. Their first opportunity of funding practices will be in SFY2015. Updates on their status will be provided in subsequent annual reports.

- Nutrient Trading and Innovative Approaches

Nutrient trading was and continues to be a hot topic moving forward into NRS implementation. IDNR, EPA, and several stakeholder groups have discussed and met about the different aspects of successful trading programs. IDNR has met with EPA to discuss NPDES permitting options to accommodate different styles of trading programs. ISU and UI have been approached with questions on how to create the market utilizing the scientific assessment. More work is expected in the upcoming year.

- Research & Technology

The Iowa Nutrient Research Center (NRC) was created in 2013 to pursue science-based approaches to areas that include evaluating the performance of current and emerging nutrient management practices, and providing recommendations on implementing the practices and developing new practices.

With an initial appropriation of \$1.5M from the Iowa Legislature, the Iowa NRC funded 10 projects. Details on these projects and progress reports can be viewed at <http://www.nutrientstrategy.iastate.edu/center>

The Iowa NRC received its second appropriation of \$1.375M during the 2014 Legislative session. An RFP will be released in the summer of 2014 for selecting new research projects through the Center.

The Science Assessment Team led by College of Ag and Life Sciences - Iowa State University developed a set of practices shown by research to reduce the loss of nitrogen and phosphorous to surface water. The practice table also included the estimated average and standard deviation of loss reduction for N and P. The set of practices and estimated effectiveness was based on the research available in 2012 when the report was prepared. The practice list is expected to be a living document as new practices are identified and proven and the performance and predictability of existing ones improves. The process outlined below is the recommended method for updating the Iowa Nutrient Reduction Strategy non-point source approved practice list.

- 1.) The CALS Dean appoints the Science Team and asks the Director of the Iowa Nutrient Research Center to coordinate the review with the Science Team.
- 2.) The Science Team reviews the Non-Point Source Practice Lists to:
 - a. update the average and standard deviation of existing practices
 - b. add new peer reviewed practices that reduce the loss of nutrients to surface water.
- 3.) A practice may be revised or a new practice added to the practice list by the following:
 - a. A proposal is submitted to the Director of the INRC before July 1 each year. The proposal shall include:
 - i. Peer reviewed article(s) showing impact of the practice on water quality and crop yield.

- ii. Or, present research reports from credible sources with data for review by the Science Team.
- 4.) Science Team meets during the fall and determines if:
 - a. Practice list values for existing practices should be revised and
 - b. if new practices should be added to the practice list. Science Team also assigns the average and standard deviation for the new practices added to the practice list.
 - 5.) The Science Team estimates the cost to implement the practice, cost per unit of nutrient reduced and the impact, if any, on crop yields.
 - 6.) Science team publishes updated practice list for non-point sources that becomes an addendum to the Iowa Nutrient Reduction Strategy. The published report is accompanied with the explanation of any new practices added and references to the original published peer-review article. The updated practice list is posted at www.nutrientstrategy.iastate.edu .

Following the process for updating the list of approved non-point source practices, Saturated Buffers has been approved and added to the practice list. Saturated buffers intercept tile drainage from a field by using a tile line perpendicular to the field tile that runs under a vegetative buffer in the riparian area near a stream. Drainage water saturates the soil in the buffer and is denitrified before reaching the stream.

- Strengthen Outreach, Education, Collaboration

Outreach conducted directly to over 26,000 farmers and 1,000 Certified Crop Advisors (CCAs) through the ISU Extension and Outreach Meetings.

A major focus of the Nutrient Strategy has been expanding learning and outreach opportunities. In 2014, IDALS through the WQI and partners have conducted over 32 events led by 45 SWCDs in cooperation with over 44 groups and organizations. These events/activities include field days, workshops, demonstration plots, etc. related to improving management of nutrients to prevent loss. This accounting is for WQI supported activities and does not include other SWCD, outside organizations, university led, or other project outreach events.

Last October, Gov. Terry Branstad and Lt. Gov. Kim Reynolds joined Iowa Secretary of Agriculture Bill Northey and Department of Natural Resources Director Chuck Gipp for the launch of the www.CleanWaterIowa.org website. Iowans can visit the site to learn more about the voluntary, science-based practices that can be implemented on farms and in cities to improve water quality. The site includes descriptions of water quality practices, their benefits, and links to additional information. A newsletter is emailed out to anyone who subscribes on the main page of the CleanWaterIowa.org website. Each newsletter includes updates from the past few weeks, and a link to the full News & Blog article or Practice at Work success story. Iowans can also follow @CleanWaterIowa on Twitter or “like” the page on Facebook to receive updates and other information about the ongoing Iowa water quality initiative.

The agribusiness community continues to be engaged in the NRS through partnering in all 13 demonstration watershed projects, other watershed projects, etc. These efforts will continue to be fostered and provide more tangible references in future reports.

- Increased Public Awareness and Recognition

The Iowa Farm Environmental Leader Awards were established in 2012 and recognized 67 individual farmers or farm families. In 2013, 64 recipients were recognized. In 2014, nominations were being still being accepted at the end of May.

Many local SWCDs, watershed groups and other organizations recognize members of their community for their efforts to improve conservation and water quality. Efforts will be made to analyze and summarize new and existing recognition programs.

- Funding

IDALS received a direct appropriation of \$2.4M to establish the Water Quality Initiative (WQI) in state fiscal year 2014. Also, a one-time appropriation of \$10M was made to the WQI. 70% was designated to the development of targeted watershed demonstration projects and 30% could be used to support statewide initiatives. In addition to this funding, \$7M in one-time appropriations were made to the state cost-share program and \$3M of funding was provided to the Watershed Improvement Review Board, 50% of which was designated to directly to help implement nutrient reduction practices based on the Iowa Nutrient Strategy Science Assessment.

In state fiscal year 2015, IDALS received an increase in direct appropriations to the WQI to \$4.4M to further the support of implementing the activities outlined in the Iowa NRS.

Once established, future funding reporting efforts will revolve around a variety of state and federal programs. A private investment summary could be part of any public or private tracking framework.

5.) Storm Water, Septic Systems, Minor POTWs

Private Sewage Disposal Systems (PSDS):

Upgrading of failing septic systems continues through implementation of Iowa's "time of transfer" law that took effect in 2009. Database improvements are expected over the next year to better enumerate the success of this program. The Private Sewage Disposal Program has also integrated a PSDS nutrient removal training course for septic installers, sanitarians, and inspectors. Two training courses were hosted during this first year of INRS implementation.

6.) Accountability and Verification Measures

The Water Resources Coordinating Council (WRCC) established the Measures of Success subcommittee to develop a list of measures to help document and track the progress of water quality improvements in Iowa. When finalized, these indicators should have the ability to be aggregated at a watershed and state scale to evaluate cumulative impacts and trends.

The Iowa Nutrient Research Center has undertaken an effort with the aid of USDA-NRCS, USDA-FSA and IDALS to quantify practices applied through publicly funded programs by practice. Implementation of practices varies annually. Current efforts focused on the data gathered for practices applied in 2014 before moving to past years as far as is reasonably able to be collected. This exercise will be the basis for developing a framework that will allow this effort to be repeatable annually. The framework will be able to outline what information needs to be collected from which sources, when the information is available, and what additional information should and could be collected. Individual practice data would provide the basis for analysis by the ISU Science Team to develop load reduction estimates.

The Iowa NRC will be seeking data from USDA-NRCS and FSA. It's anticipated the data is readily available and obtainable per the request. These funds would not directly be used to implement the Iowa NRS, but are an important component that would complement the implementation efforts of the NRS.

To date, most efforts around quantifying practices applied has revolved around state and federally funded programs with a share of the investment by private landowners. The missing component is practices applied with entirely private investments. Information collected from land improvement contractors have indicated 50% or more of the terraces and waterways they do are funded entirely with landowner investment. The majority of nutrient management decisions are based on individual farmer or with input from agronomists, university, or CCAs with no public funding support.

The development of a tracking framework that can quantify privately implemented practices is currently under development. This information could include the trends in total amount of fertilizer applied every year, trends in infrastructure or implement investments by farmers and ag retailers, etc. Anecdotal evidence would suggest these recommendations have changed over time to provide better advice, improve efficiency, and reduce loss of applied fertilizers. It is a goal of the NRS to better strategize obtaining properly protected, aggregate information on this practice adoption. This information could help develop trends over the years to show how changes in fertility management are being made in response to activities driven by private sector investments or conducted through the NRS.

There are many instances of farmers investing in conservation tools such as no-till planters, in-season nitrogen management equipment and other implements that help manage these conservation systems. There are also ag retailers that have invested in equipment to offer services driven by the demand to improve the timing on nutrient application, seeding cover crops, etc. To be able to quantify this, will be a major undertaking and those actions are being discussed presently.

- Results from comprehensive annual ambient stream monitoring and analysis utilizing existing permanent monitoring locations and focused study areas

A technical work group was formed and first met December 3, 2013. The technical work group was given the charge from the Nutrient Reduction Strategy to help find an efficient and reproducible procedure for the DNR to regularly calculate nutrient loads from data in our ambient monitoring network. The technical work group focused first on nitrogen, as this represented a more consistently

detected nutrient in the monitoring network and therefore could be handled differently than the less detected phosphorus.

| Baseline Estimates from the NRS | Nitrogen | Phosphorus |
|--|-----------------|-------------------|
| Statewide Baseline Load (tons) | 307,000 | 16,800 |
| Load Reduction Needed for 45% Reduction | 138,150 | 7,560 |
| NPS Portion of Load Reduction | 125,870 | 4,872 |
| PS Portion of Load Reduction | 12,280 | 2,688 |
| % of Target Load Reduction from NPS | 91.1% | 64.4% |
| % of Target Overall Load Reduction from PS | 8.9% | 35.6% |

- Technical Workgroup Members include representatives from the following agencies and organizations:
 - ISU, IDALS, DNR, UI, Iowa Soybean Association (ISA) & USGS.

The baseline cited in the Iowa NRS for 2012 based on data collected from 2000-2010. The baseline established from the Strategy will be used in future measures and progress as determined by the Measures of Success Subcommittee. The baseline was established based on existing data available in Iowa by MLRA. Through activities conducted through efforts including, but not limited to the Water Quality Initiative (WQI) and Nutrient Research Center, new data and information will be available to help refine and improve calculating changes in baseline.

The technical work group developed a method to compare the various load calculations, including development of a standardized data set based on the work completed for the Nutrient Reduction Strategy development. Individual workgroup members were assigned specific load calculation techniques to apply to the standard data set, and reported the results back to the group. The outcomes from the different techniques were organized and evaluated by the workgroup. Based on the evaluation, a consensus method was selected for use with the nitrogen data. The technical work group is currently producing write-ups of the different techniques for nitrogen that were evaluated. These will be compiled into a report that will also identify the method selected to provide a regular nitrogen load estimate. The method selected for nitrogen will be implemented in FY 2015.

Work is continuing on establishing a standard phosphorus load method. Phosphorus tends to be bound to sediment and the majority of the loading occur after rain events. The data available does not capture all rain events nor is the monitoring network designed to do so. This adds complexity to providing an accurate statewide phosphorus load. Future meetings focusing on phosphorus will follow the general approach used for nitrogen, after most work group have completed this year's field work obligations.

The WRCC will continue to coordinate expanding opportunities for water monitoring locations with an emphasis on the designated HUC 8 watersheds and the smaller watershed demonstration projects funded through the Water Quality Initiative (WQI).

Collaboration with the Science Assessment Team to model and predict expected performance of implementation strategies is currently underway.

7.) Public Reporting

All 13 currently funded projects (status map included Attachment A) are in the demonstration and assessment phase. Watershed management plans of each individual watershed will be developed as these projects proceed. Project staff and Iowa State University are conducting background assessments to show conditions/practices prior to establishment of the projects.

The Iowa Nutrient Research Center is conducting a review of publicly funded conservation practice data. The intent is these practices be quantified to produce load reduction calculations. A private framework would be set up in the same manner to collect this information as well.

Annual Report Generation Procedure:

- Reporting period covered in reports will be from June 1st through May 31st of consecutive calendar years starting June 1, 2013 after the Iowa Nutrient Strategy was finalized.
- Information to be included in the annual report will be submitted to and compiled by the three principals (IDALS, ISU, and DNR) that worked with Iowa stakeholders to develop the Iowa Nutrient Strategy.
 - IDALS will receive and compile information regarding nonpoint source progress
 - ISU will receive and compile information relating to the updates and progress of the science related to nonpoint conservation practices
 - DNR will receive and compile information regarding point source progress
- The deadline for WRCC members and WPAC to submit information for inclusion in the annual report will be May 31st of each year.
- IDALS, ISU, and DNR will compile the information received into the annual report.
- Annual reports will be presented by the principals at the July WRCC meeting each year.

Strategy Updates Evaluation Process:

- IDALS, ISU, and DNR will provide a preliminary evaluation of the need for review and updates to the Iowa Nutrient Strategy annually at the May WRCC meeting. This will include any proposed updates to the Strategy if applicable.
- WRCC discussion will be held at the May WRCC meeting to identify general consensus with the preliminary evaluation including any additional considerations for incorporation into the evaluation included in the annual report.

Public Feedback on Adaptive Management Approaches:

The Iowa Nutrient Strategy website will be modified to provide a link where the public can provide feedback on adaptive management approaches to improve implementation, strengthen collaborative local, county, state, and federal partnerships, and identify additional opportunities for accelerating cost effective N and P load reductions. This link will be available on a year round basis to provide for continuous public feedback opportunity.

8.) Nutrient Criteria Development:

Lakes

A research study at Iowa State University (ISU) relating to the development of lake nutrient criteria is nearing completion. The study examines relationships between water quality conditions and lake biological assemblages (i.e., benthic macroinvertebrates, fish, phytoplankton, and zooplankton). A representative subset of 45 recreational impoundments and natural lakes were included in the study. One of the main products from the study is a multi-assemblage biotic index that has the ability to distinguish lakes ranked along a gradient from poor-to-good water quality. Nutrient enrichment-related water quality parameters, including total phosphorus, phytoplankton chlorophyll A, and total suspended solids, were among the strongest predictors of biological assemblage metrics in the lakes studied.

In May 2014, the research team provided a draft project report titled "Benchmarks of biological integrity for lake restoration success - Fish, invertebrate, and plankton communities in Iowa lakes." A meeting was subsequently held at ISU to discuss the research findings and draft report with IDNR. The final draft is expected to be available later this year. The research did not go as far as identifying threshold levels in nutrients or nutrient response parameters that might serve as criteria benchmarks; however, the development of a multi-assemblage biotic index that is correlated with lake nutrient status represents a major step forward. Additional work and experience applying the tools developed in the project will be necessary. This includes establishment and application of standardized sampling and data analysis procedures, as well as utilization of biotic index sampling results for completion of lake water quality assessments and analysis of nutrient stressor-response thresholds.

Rivers and Streams

The Stream Nutrient Technical Advisory Committee (hereinafter referred to as "TAC"), continues to develop nutrient criteria recommendations to protect stream aquatic life. In August 2013, IDNR provided the TAC with a draft report for technical review. The draft report titled "Development of Nutrient Enrichment Criteria for Iowa Streams" and dated August 23, 2013, contains data analysis results and information from published scientific studies that support preliminary nutrient criteria recommendations for small- and medium-size (wadeable) streams. Recommendations for headwater creeks and large rivers are deferred pending the completion of ongoing nutrient monitoring and data analysis.

A TAC meeting was held in November 2013 to discuss the draft report and criteria recommendations. The draft report, notes from the TAC meeting, and a summary of TAC comments are available at the IDNR [Nutrients](#) web page.

A second draft, which incorporates the TAC's comments and other substantive changes, is nearing completion. The TAC will again have the opportunity to review the draft report and nutrient criteria recommendations. After comments from the TAC and other reviewers have been addressed and the report has been finalized, IDNR will evaluate the recommendations and identify appropriate next steps relating to stream nutrient criteria development and implementation.

Iowa Nutrient Strategy Updates Evaluation

IDALS, ISU and DNR collaborated on identifying needed updates to the text of the Iowa Nutrient Reduction Strategy. Updates were identified as necessary to keep the text of the strategy up to date based on current information and status of efforts related to the strategy. Following is a summary of the updates that were identified.

Nonpoint Source Updates:

- Update strategy to list the 9 priority HUC8 watersheds that were designated by the WRCC in February of 2013 and establish the anniversary date for the 5 year review of these watersheds
- Update Section 1.4.5 of the strategy to include discussion on source water protection efforts

Science Updates:

- Add new Section 2.6 describing the procedure for updating the practice list

Point Source Updates:

- Updated monitoring provisions to reflect changes in permit implementation for industrial facilities listed in the NRS
- Added calculation for annual average permit limitations for total nitrogen and total phosphorus
- Described method for adding or removing facilities affected by the NRS
- Updated the list of affected facilities

Appendix: Report(s) on Activities Conducted by WRCC and WPAC Members in Support of the NRS.

Iowa Farm Bureau Federation Iowa Nutrient reduction Strategy Implementation Highlights 2013-2014

State Legislation

Actively supported more than \$54 million in general funds and \$31.36 million in new, one-time (ending fund balance) funds last two years for 10 different soil and water conservation programs.

County Farm Bureaus in the Water Quality Initiative Projects

There are at least four county Farm Bureau or affiliated service companies named as partners in the 13 IDALS Water Quality Initiative priority watershed projects. County Farm Bureaus are continually being encouraged to find active roles in all the projects.

SHARE Grants

The SHARE grant program is a new IFBF program in 2014 supporting conservation/water quality, enhancing the public's understanding and appreciation of agriculture, and community development projects. This year it is providing \$43,935 for six new local conservation/water quality projects.

Iowa Minutes

We've done 10 Iowa Minutes on conservation practices in the last two years. These are 60-second news features that highlight the role agriculture and Farm Bureau in the lives of Iowans, and show the good work Iowa farmers are doing to protect the soil and improve their watersheds. Each Iowa Minute runs for a month in every television market in Iowa, including one in Omaha and one in Missouri, and reaches 2.6 million consumers.

Conservation Counts Iowa Campaign

The goal is to support and encourage members' ongoing conservation efforts, active involvement in the Iowa Nutrient Reduction Strategy, and to assist the IFBF in securing additional funding for the Water Quality Initiative and related soil and water programs. Media components for the campaign consist of TV, radio and print. These mediums link Iowans back to the **Conservation Counts Iowa** website for more information. The long-term outcome for the website is to educate and inform farmers, legislators and Iowans about on-going conservation efforts and how we are all part of the solution. The message has reached more than 8.8 million households, so far.

Conservation Farmer of the Year Award Sponsorship

The award is co-sponsored by the IFBF and the Iowa Department of Agriculture and Land Stewardship. This recognition program began in 1952 and highlights the continuous voluntary

conservation improvements made by all Iowa farmers, but focuses on one statewide winner. Farm Bureau members can now nominate deserving neighbors for award. The statewide winner this year will have the free use of a John Deere 6D Series utility tractor for up to 12 months (or up to 200 hours). The Van Wall Group of Perry is donating the use of tractor to the state winner at Farm Bureau's request. The award and the tractor prize for the state winner help raise awareness of the great things all Iowa farmers do every day to conserve state soil and water resources. The winner will be honored September 4.

Spokesman

There have been at least 37 articles in the weekly *Farm Bureau Spokesman* and monthly *Family Living* associate member publication about the Nutrient Reduction Strategy and IDALS Water Quality Initiative since it began.

INRS Leaders Newsletter

The IFBF started a new monthly e-newsletter in February 2014 sent to 100 county Farm Bureau boards, county leaders and staff working on conservation and natural resource issues, encouraging active strategy implementation roles.

News Services & Public Relations

There have been more than 130 conservation-themed stories and on the IFBF website and sent to media in the last year. There have been three Specific "Calls to Action" where Speaker Corps members and Ag Leaders were encouraged to submit letters to the editor with a focus on conservation and what they are doing on their farm. Results include more than 40 letters submitted by members to local and statewide newspapers, with nearly one-half of submitted letters printed, including the *Des Moines Register* and *Cedar Rapids Gazette*.

Also:

- Promoted "Innovations in Conservation" at the IFBF Annual Meeting to media, resulting in three stories on progress in Iowa water quality.
- Recruited members to attend EPC meetings to share their conservation success stories and the negative impacts of regulations on their farm.
- The IFBF includes a segment on conservation in each monthly "On the Record" e-newsletter sent to Speaker Corps members. Each month includes a 'communication tip' for sharing conservation stories and bulleted conservation talking points.
- Work with county FBs to share conservation-themed messages through paid local media and outreach activities during Ag Week and Earth Day celebrations.
- Sponsored the Cover Crop Workshops during the Iowa Power Farming Show in Des Moines, January 2014. Speaker presentations are available to all Iowans on the Conservation Counts Iowa website.

IA-Cedar Tributary Watershed Study Proposal

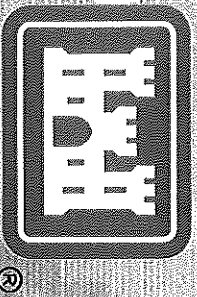
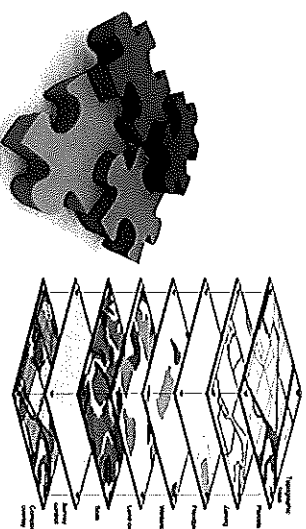
Michael J. Tarpey P.E.

Jason T. Smith P.E., CPESC

Rock Island District

September 18, 2014

Presented to the Water Resources
Coordinating Council



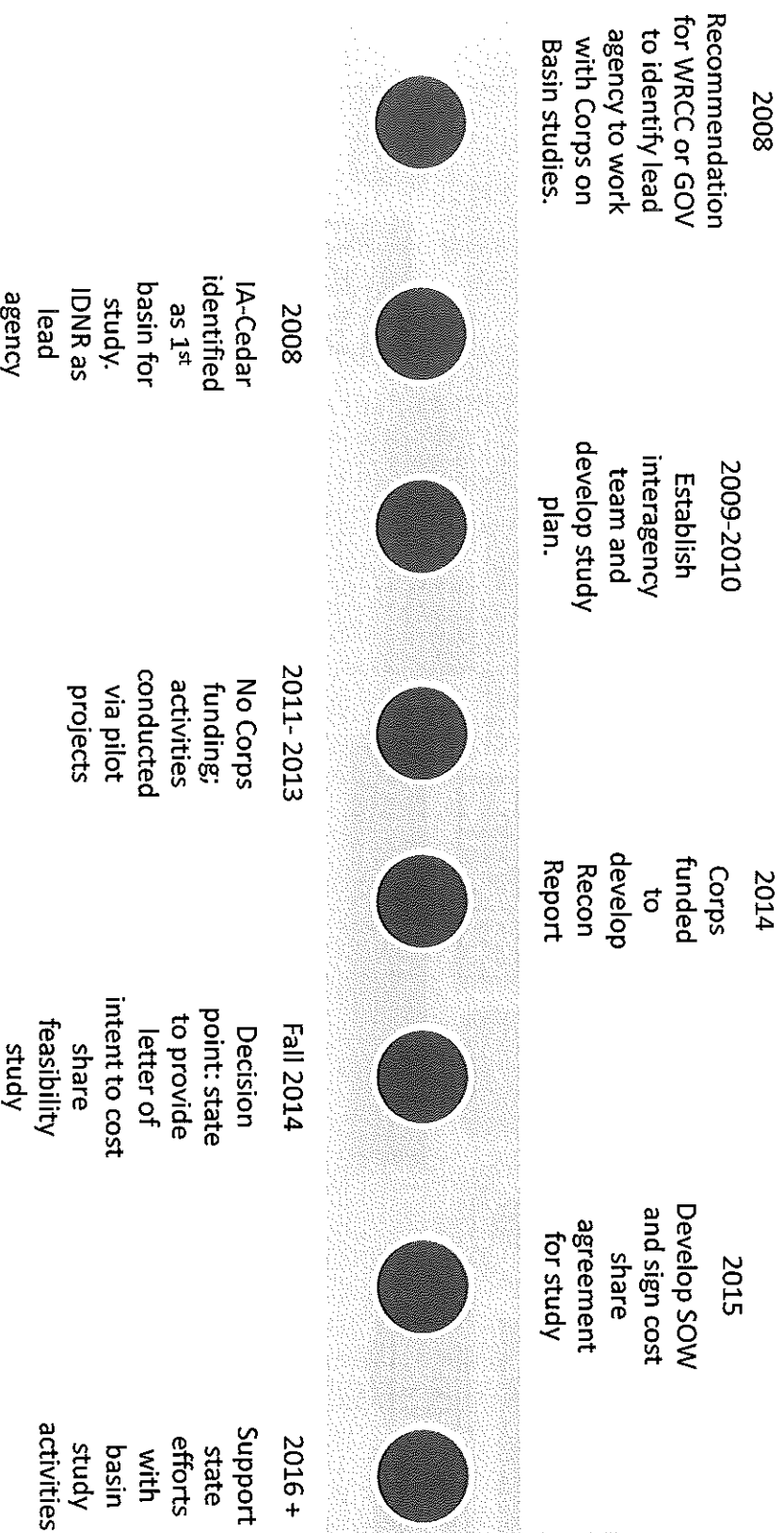
US Army Corps of Engineers
BUILDING STRONG

Bottom Line Up Front

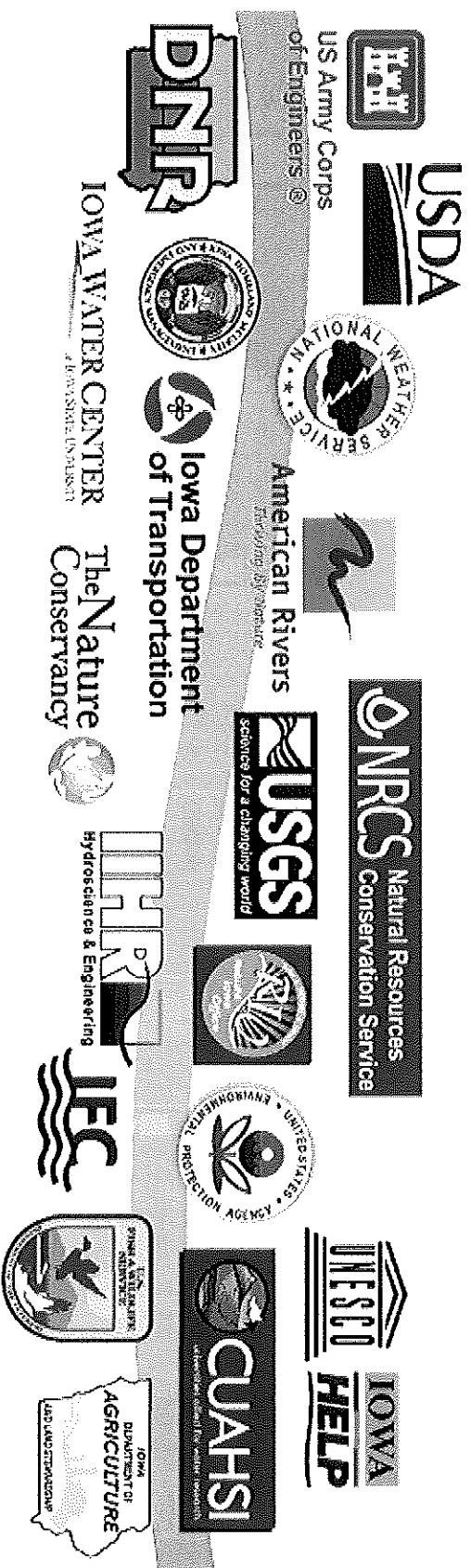
- The State and Corps may benefit from a cost shared Feasibility study in the Iowa-Cedar Basin
- State may use on-going activities to meet cost share requirements
- Letter of intent for recon study required for additional Corps funds



Timeline of Actions



The Interagency Team



BUILDING STRONG®

Some Related Products

| Product | Agency | Product Release/available | Estimated Cost Leveraged |
|--|---|---|--------------------------|
| Process for public engagement in IA-Cedar basin as defined in Indian Creek | Corps and others | FY13 (Available) | \$300,000 |
| IA Flood Center Hydrologic and Hydraulic Modeling | Iowa Flood Center at the University of Iowa | On-Going (Completed are Available) | \$250,000 |
| HUD Implementation Funds available for WMA's | HUD | FY 13 (Partially Available) | \$1.4 million |
| SWAT hydrologic Model for Cedar River | USGS (DNR Funded) | FY13 (Available) | \$250,000 |
| Ecosystem Services Floodplain mapping and evaluation | TNC | FY 14 – early FY 15 (partially available) | \$200,000 |
| Floodplain Storage Evaluation | American Rivers | FY13 (Available) | \$60k |
| HAZUS evaluation for IA-Cedar Rivers basin | Corps (2011 IA Silver Jackets pilot) | FY13 (Available) | \$50k |
| FSA/Corps Hydrologic and Economic Study in Indian Creek | FSA and Corps | FY13 (Available) | \$300k |



Problems

- **Problem 1 – Limited understanding of watershed processes and technological limits**
 - ▶ limited understanding of the complex interrelationships that occur in a watershed between hydrologic, geomorphic and environmental processes and the economic and social systems that depend on those processes

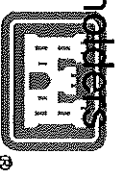
- **Problem 2 – Lack of a watershed plan to guide decision making**
 - ▶ no single watershed plan or process in place for helping guide decision making that would prioritize the types and locations of actions to be taken to meet watershed goals in an efficient and cost effective manner



Opportunities

- **Opportunity 1 - Improve understanding of the watershed processes**
 - ▶ Collect necessary data, leverage on-going research work and develop state of the art modeling tools to better define specific processes across a variety of spatial scales. Integrate data and modeling tools to allow decision maker to explore the economic, environmental and social implications of various landuse and climate scenarios

- **Opportunity 2 - Develop a comprehensive watershed plan**
 - ▶ Includes public engagement, education and outreach elements. Capturing decision points for various decision makers and informing decision making process with scientific (social and technical) data and information. Identify actions on the ground that address the problems defined by various stakeholders and decision makers



Identified Feasibility Options

- No Action
- Flood Risk Management Study
- Ecosystem Restoration Study
- Integrated Watershed Study



| Alternative | Approximate Benefits | Estimated Cost |
|---------------------------------------|---|------------------------|
| <p>1) Flood Risk Management Study</p> | <ul style="list-style-type: none"> • Explore resiliency of existing systems (Dam and Levees) • Better understanding of spatial location of conservation practices on flood stage • Identify structural and non-structural flood reduction measures (e.g. levees, zoning and ordinances, landuse change) • Increased communication between local interests and governments on flood risk and actions to reduce flood risk | <p>\$2-\$3 million</p> |
| <p>2) Ecosystem Restoration Study</p> | <ul style="list-style-type: none"> • Identify aquatic habitat restoration opportunities, including fish passage. • Identify locations for monitoring and adaptive management strategies to support existing habitat under changing conditions • Evaluate water quality effects on ecosystem health, navigation and Gulf Hypoxia • Increased communication between local interests and governments in identifying and evaluating ecosystem restoration plans. | <p>\$2-\$3 million</p> |
| <p>3) Integrated Watershed Study</p> | <ul style="list-style-type: none"> • Utilize an integrated watershed approach, which provides all of the benefits of the flood risk management study and ecosystem restoration study, but also evaluates energy production, agricultural resilience, urban development, recreation and watershed management • Use technical modeling and social engagement processes to explore local views and sub-basin relationships. • Evaluate the impacts local decisions have at a regional and national scale • Explore the trade-offs that occur at local, regional and national scales if different decisions were made. • Increased communication between local interests and governments toward a watershed based plan for short and long-term management. | <p>\$7-\$9 million</p> |



State Efforts for Potential Cost Match

- State Nutrient Reduction Strategy - IDALS
- 2014 Iowa Flood Recovery Task Force - Hall
- Iowa Mapping projects at IFC - Young
- Wildlife Action Plans - Reeder
- Floodplain permitting and Mitigation actions – Cappucio
- Recreation and Mitigation – Hoogeveen
- Source Water Protection - Ortman



Conclusion

- The State and Corps may benefit from a cost shared Feasibility study in the Iowa-Cedar Basin
- State may use on-going activities to meet cost share requirements
- Letter of intent for recon study required for additional Corps funds

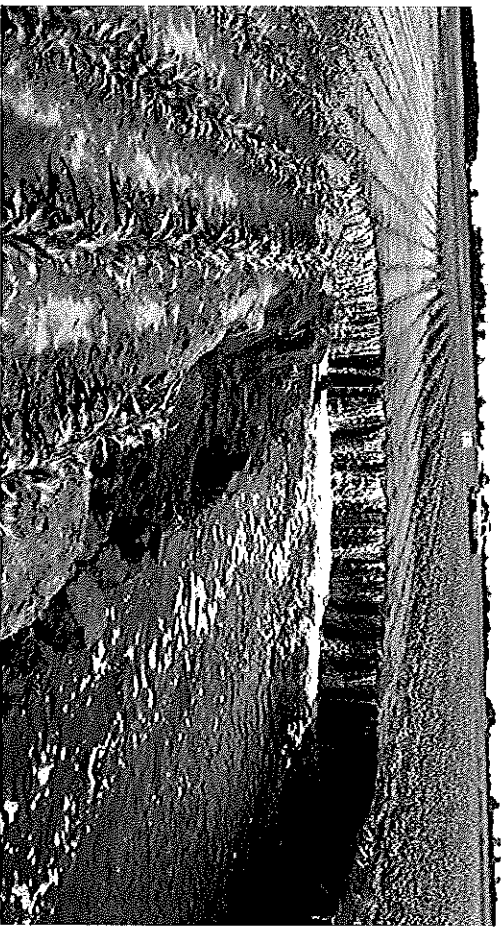
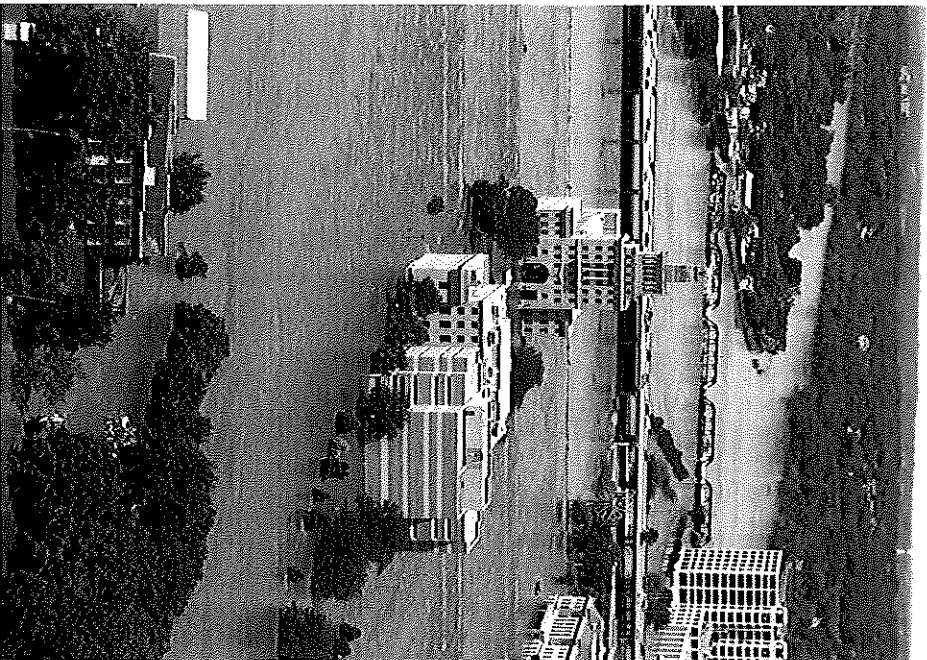


Next Steps

- State Provide Letter of Intent – NOT BINDING
- Develop a detailed scope of work, including potential work in-kind contributions
- Sign Cost Sharing Agreement
- Conduct study to support on-going State efforts



Questions



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