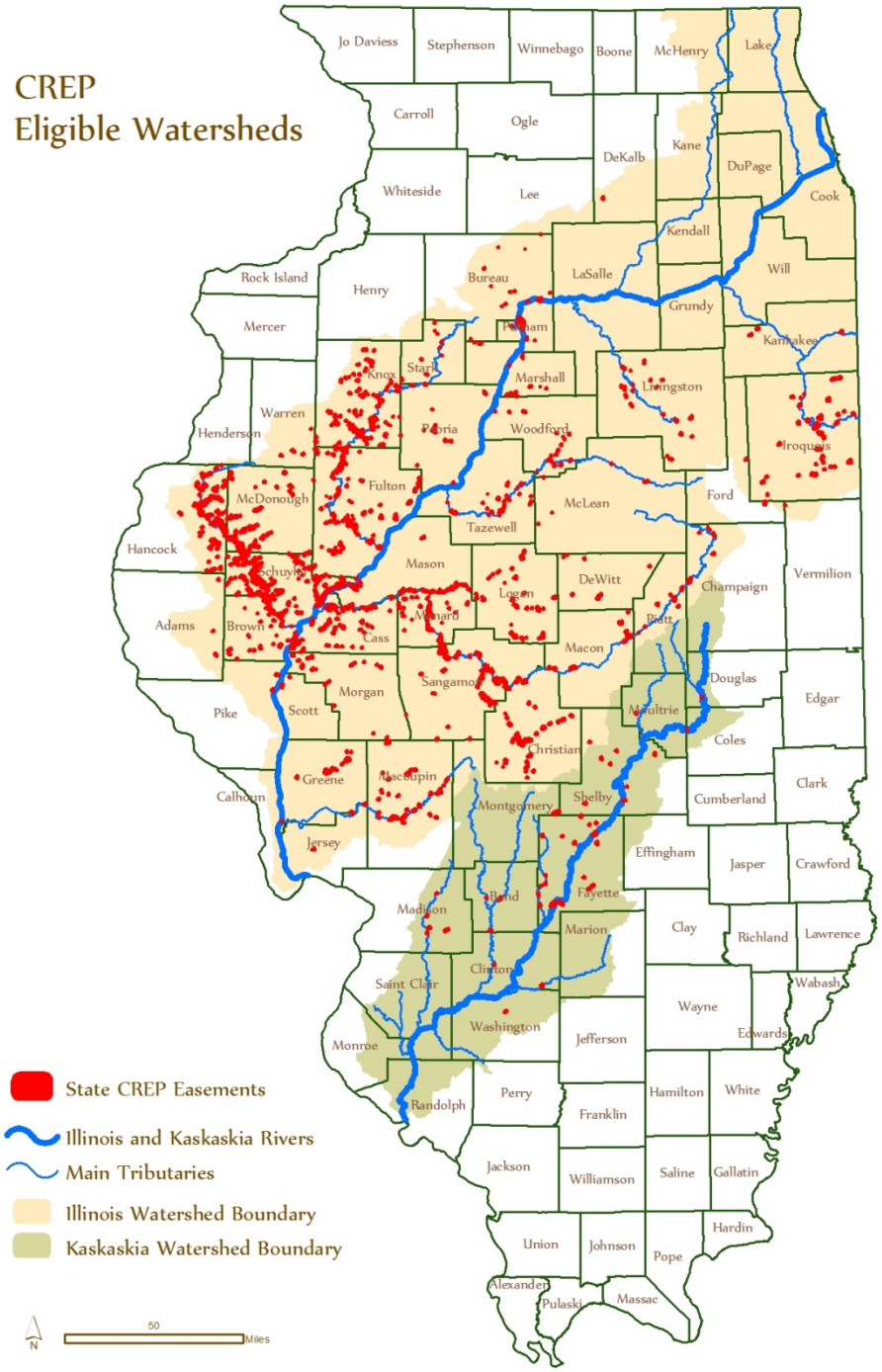
2018
Annual Report

Illinois CREP

Conservation Reserve Enhancement Program

CREP ELIGIBLE AREA AND EXECUTED EASEMENTS



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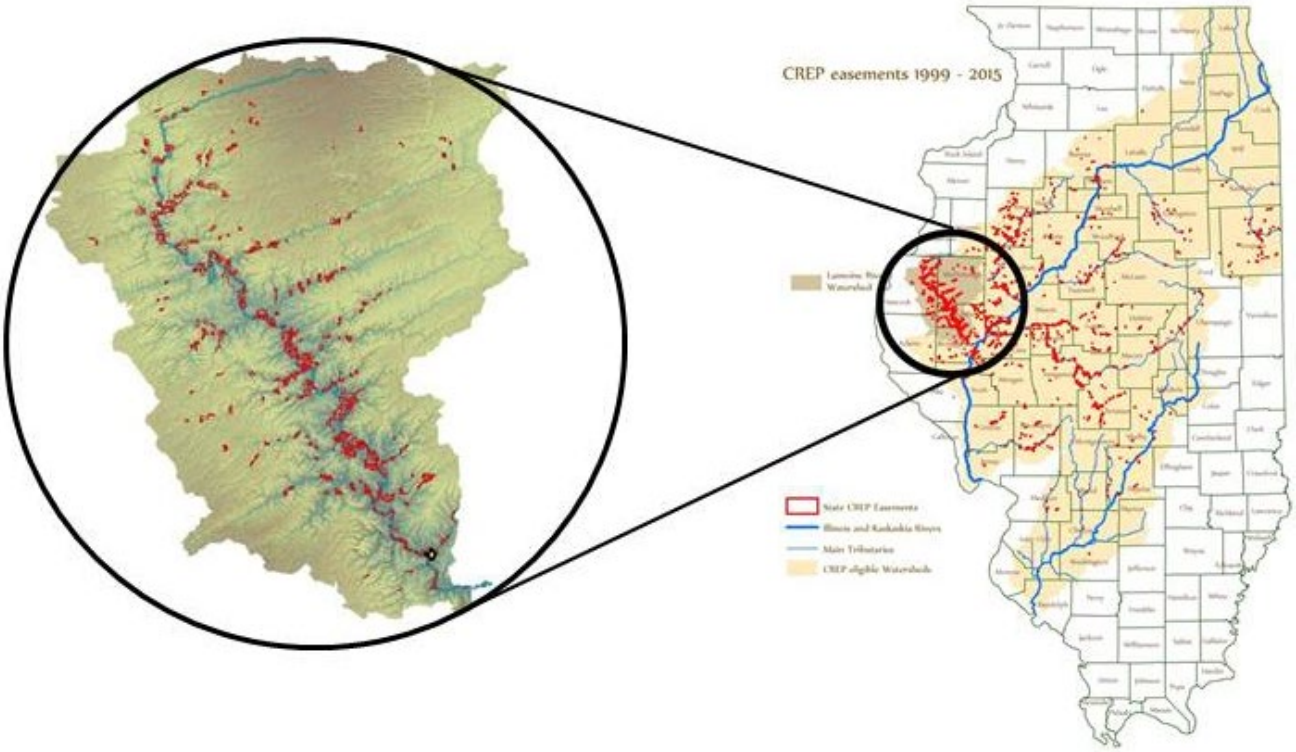
EXECUTIVE SUMMARY

The Illinois Conservation Reserve Enhancement Program (CREP) is a state incentive program tied to the Federal Conservation Reserve Program (CRP). CREP provides long term environmental benefits by allowing 232,000 acres of eligible environmentally sensitive lands within the Illinois and Kaskaskia River Watersheds to be restored, enhanced, and protected over periods ranging from 15 years to perpetuity. CREP has been driven by locally led conservation efforts, which is evident by increased landowner support. This program is a prime example of how partnerships between landowners, governmental entities, and non-governmental organizations can network to address watershed quality concerns.

Having worked hand-in-hand with USDA over the years, Illinois CREP has been instrumental in facilitating the ongoing restoration and management efforts within the Illinois and Kaskaskia River Watersheds. To achieve the goal of improving water quality within the targeted watersheds CREP has utilized a variety of Best Management Practices (BMP's) designed to protect and restore miles of riparian corridors. CREP is one of the many tools used by IDNR conservation partners to implement the IDNR Illinois Comprehensive Wildlife Action Plan (IWAP), which provides a framework for the restoration of critical habitats, increasing plant diversity and expanding habitat for species in greatest need of conservation on an agricultural dominated landscape.

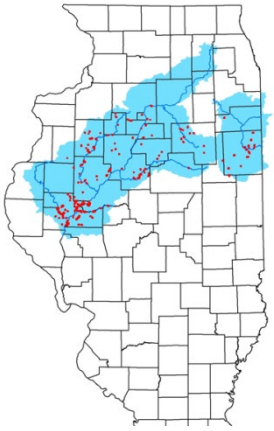
Due to the lack of a state budget for Fiscal Years 2016, 2017 the Illinois Department of Natural Resources was unable to offer state options under the Conservation Reserve Enhancement Program. Therefore the FSA and IDNR has temporarily suspended CREP enrollment (as of preparation of this report CREP is still suspended).

Currently there are 65,914 acres enrolled in Federal CREP contracts at an average rental rate of $258.75 per acre. The State has been successful in executing 1,408 CREP easements protecting 90,990 acres. CREP's overall success is notably highlighted by the response within the watershed of the Lamoine River, a major tributary of the Illinois River (see map below). Overall, there are 3,271 miles of streams within the watershed, spread out over five counties. 326 long-term CREP Easements, adding up to over 25,500 acres of protected land, have been established in the area and more than 50% of those acres were converted from cropland. The Lamoine River itself is approximately 131 miles long, with 92 miles flowing directly through or alongside CREP properties. In other words, 70% of the main river is under long-term protection providing a valuable riparian corridor of wildlife habitat while also significantly contributing to the overall water quality improvement in the Illinois River.

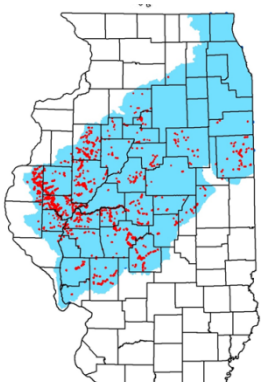


ILLINOIS CREP TIMELINE

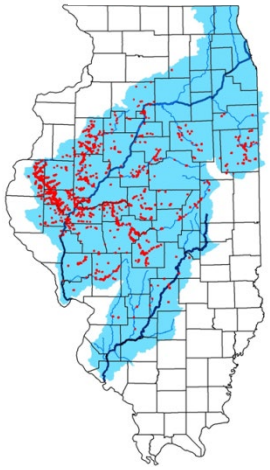
1998 - 2000



1998 - 2007



1998 - 2015



Map images depict the eligible watersheds in blue, and CREP easement locations in red

CREP is a federal-state program that was created by a Memorandum of Agreement (MOA) between the U.S. Department of Agriculture, the Commodity Credit Corporation, and the State of Illinois in March 1998. Enrollments into this program began on May 1, 1998. The MOU was amended several times during the early years to clarify terms, increase the number of practices offered, and to expand the eligible area.

In 2005 the IDNR, in cooperation with other conservation partners, initiated the implementation of The Illinois Comprehensive Wildlife Action Plan (ICWAP). The ICWAP's goals are to use consistent science-based natural resource management principles, to increase the amount and quality of habitat available to support Illinois' native plant and animal species and other game species; promote their population viability, and regulate the recreational, commercial, and scientific utilization of those species; to ensure their long-term persistence and abundance and provide for their appreciation and enjoyment by future generations of Illinoisans while also expanding the frontiers of natural resource management. CREP easements which lie within the ICWAP's priority areas will provide long term protection of quality habitats identified by the ICWAP's goals.

Due to insufficient State funds the Illinois CREP was temporarily closed to open enrollment in November 2007. However, monitoring and land stewardship continued.

In October 2010, after overwhelming public support The Illinois General Assembly appropriated $45 million to reopen and expand CREP to include the Kaskaskia River Watershed. The USDA, Commodity Credit Corporation, and the State of Illinois subsequently amended their Memorandum of Agreement (MOA) to include the Kaskaskia River Watershed with the Illinois River Watershed.

Since 2010 a total of 159 state easements have been approved in the Kaskaskia and Illinois River Watersheds totaling 13,018 acres; the acres in the Kaskaskia River Watershed totaling 4,708 acres and those in the Illinois Watershed totaling 8,310 acres. The average acreage per enrollment is 81.87 acres.

Since the program started in 1998, landowners have voluntarily enrolled 90,990 acres in CREP through 1,408 easements to help improve and restore natural habitats in the Illinois CREP eligible area.

July 1, 2015 - Due to the lack of a state budget, the Illinois Department of Natural Resources is unable to offer state options under the Conservation Reserve Enhancement Program. Therefore the FSA and IDNR temporarily suspended CREP enrollment (as of preparation of this report CREP is still suspended).

RECENT OUTREACH, STEWARDSHIP, AND MONITORING

The county Soil and Water Conservation Districts (SWCD) within the CREP area are the driving force spearheading CREP on the local level. As the Grantee of the CREP Conservation Easements (Easement) the SWCD's continue to enforce the terms of the recorded Easement by conducting compliance monitoring checks and annual land ownership reviews. Monitoring of the CREP Easements is an essential aspect of the overall future of the program. Monitoring not only protects the SWCD as the Grantee but, most importantly, it also protects the landowner from possible violations.

Prior to the suspension of CREP the Illinois Department of Natural Resources (IDNR) had partnered with the Illinois Environmental Protection Agency (IEPA) and the Association of Illinois Soil and Water Conservation Districts (AISWCD) to hire six (6) CREP Resource Specialists. These specialists were dedicated to counties primarily in the Illinois River Watershed to assist the SWCD's with landowner outreach and enrollment. IDNR also partnered with the National Great Rivers Research and Education Center (NGRREC) who were awarded a National Fish and Wildlife Fund Grant to hire four (4) Land Conservation Specialists to market CREP and assist the districts as needed in counties primarily in the Kaskaskia River Watershed. Once CREP is reopened the IDNR and the AISWCD and NGRREC will discuss details to reinstitute the CREP Resource and Land Conservation Specialists initiative.

The State continues to monitor and evaluate sediment and nutrient delivery to the Illinois River. Nutrient and sediment data have been collected since the program's inception in 1999. According to the Illinois State Water Survey's (ISWS) recent data indicates that both sediment and nutrient delivery to the Illinois River has gradually either stabilized or decreased as a result of the implementation of BMP's in the Illinois River watershed. The most significant outcome has been the slow decreasing trend of nitrate-N yield from major tributary watersheds.

The IDNR is also working with Illinois Natural History Survey to maintain a basin-wide monitoring and assessment program for wadeable streams in the Kaskaskia River. Baseline information on aquatic macroinvertebrates (EPT), freshwater mussels, and fish have been collected at selected reaches using a stratified random sampling design to characterize conditions throughout the watershed and provide for long-term trends assessments. Populations of selected species are monitored in focal reaches associated with high biological diversity Biologically Significant Streams BSS reaches) or sensitive taxa enhanced Dissolved Oxygen (DO reaches), Species in Greatest Need of Conservation (SGNC).

The IDNR has worked with the University of Illinois' Critical Trends Assessment Program (CTAP) staff to maintain a biological monitoring program for CREP to assess the conservation practices and wildlife habitat on property enrolled in CREP. CTAP samples the bird communities of forests, grasslands, and wetlands using point-count based methods. During data collection, the presence and abundance of each species seen or heard during the count period is recorded.

The Illinois Nutrient Loss Reduction Strategy (Illinois NLRS) is a framework for using science, technology, and industry experience to assess and reduce nutrient loss to Illinois waters and the Gulf of Mexico. The Illinois NLRS builds upon existing programs to optimize nutrient loss reduction while promoting increased collaboration, research, and innovation among the private sector, academia, non-profits, wastewater agencies, and state and local government. CREP contributions to nutrient loss have been included in baseline reports and will be for all future reports. IDNR has been part of the Agricultural Water Quality Partnership forum, and helping to facilitate the best way to share and aggregate Best Management Practice (BMP) implementation data across agencies, decide which BMP implementation parameters will be tracked (e.g. cover crops, wetlands, buffer strips, etc.) and how the data will be aggregated. The IDNR and CREP program will continue be involved in tracking statewide (and agency-wide) progress in accomplishing the INLRS.

PROGRAM EXPENDITURES

The Memorandum of Agreement (MOA) for the Illinois CREP details the formula to determine the overall costs of the program: total land retirement costs (which will include the CRP payments made by the Commodity Credit Corporation (CCC) and the easement payments or the bonus payments made by Illinois), the total reimbursement for conservation practices paid by the CCC and Illinois, the total costs of the monitoring program, and the aggregate costs of technical assistance incurred by Illinois for implementing contracts and easements and a reasonable estimate of the cost incurred by the State to develop conservation plans.

Since the CRP contract payments are annual payments spread out over 15 years, a 2.3 percent net present value (NPV)* discount rate (per MOA) was used to compare the CRP payments to the State Easement payments.

Per the current agreement, the State of Illinois must contribute 20% of the total program costs. Based on USDA reports** IDNR contributed 30.67% of the total program costs based on the following calculations;

> $255,828,712.50 (15 years x 65,914 acres x 258.75 avg. rental rate = $255,828,712.50) was contributed by USDA FSA**. This amount was amended by IDNR to reflect the 2013 re-enrollment of expired CRP acres with perpetual CREP easements ($1,528,283.64),

2018 USDA Report	$255,828,712.50
2013 USDA CREP re-enrollments	($1,528,283.64)
Amended total	$254,300,428.86

*Net Present Value (NPV) http://www.whitehouse.gov/omb/circulars_a094/a94_appx-c/

**https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/Conservation/PDF/SEP2018%20Summary.pdf

CREP ENROLLMENT AND FINANCIAL FIGURES

Illinois CREP Summary 1998 - Sept 30, 2018	
Number of Current Federal Contracts - 4,261	Current Federal Acres - 65,914
Number of State Easements - 1,408	Total State Protected Acres - 90,990

CREP Contributions 1998 - Sept 30, 2018	IDNR	USDA *	USDA (NPV 2.3%) **
Acres Enrolled as of Sept, 30 2018	90,990	65,914	
Total Life of Contract Rent (15 Yrs)		$254,300,428.86	$180,805,895.33
Cost Share		$21,077,916.31	$21,077,916.31
Monitoring [a]	$8,913,034.18		
AISWCD CREP Assistants IEPA 319 [b]	$2,180,665.94		
Illinois State Enrollments [c]	$71,572,168.41		
IDNR In-Kind Services [d]	$6,641,335.14		

a – Illinois Natural History Survey, National Great Rivers Research and Education Center, Illinois State Water Survey and United States Fish and Wildlife Service.
b – Association of Illinois Soil and Water Conservation Districts CREP Specialists.
c – Landowner Easement Payment, Practice Cost Share, SWCD administrative costs, property survey costs, title and recording fees.
d – IDNR staff personal services associated with CREP enrollment and management.

Total CREP Contribution 1998 – Sept 30, 2018	IDNR	IDNR/USDA *	IDNR/USDA **
USDA Total		$275,378,345.17	$201,883,811.64
IDNR Total	$89,307,203.67		
Program Total		$364,685,548.84	$291,191,015.31
% of IDNR Program Contribution		24.49%	30.67%
IDNR Easement Payments Total	$71,572,168.41	$346,950,513.58	$273,455,980.05
% of IDNR Easement Contribution		20.63%	26.17%

***CRP Monthly Summary – September 2018 – https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/Conservation/PDF/SEP2018%20Summary.pdf**

****Net Present Value (NPV) http://www.whitehouse.gov/omb/circulars_a094/a94_appx-c/**

ILLINOIS CREP GOALS

The goals for the Illinois CREP were revised in 2010 to reflect the expansion into the Kaskaskia River Basin and to highlight the importance of the connection to the Mississippi River and the Gulf of Mexico. The goals of the program are:

- **Goal 1:** Help meet the Federal goals to reduce nitrogen loading to the Mississippi River and the Gulf of Mexico, thereby helping to reduce hypoxia in the Gulf of Mexico.
  - **Goal 1a**: Reduce the amount of silt and sedimentation entering the main stem of the Illinois and the Kaskaskia Rivers by 20 percent;
  - **Goal 1b**: Reduce the amount of phosphorus and nitrogen in the Illinois River and Kaskaskia River by 10 percent;
- **Goal 2:** Increase by 15 percent, the populations of waterfowl, shorebirds, nongame grassland birds, and State and Federally listed threatened and endangered species such as bald eagles, egrets, and herons;
- **Goal 3:** Increase the native fish and mussel stocks by 10 percent in the lower reaches of the Illinois River (Peoria, LaGrange, and Alton reaches) and Kaskaskia River.

MONITORING PROGRESS TOWARD ACHIEVING CREP GOALS

Illinois State Water Survey

Monitoring and Evaluation of Sediment and Nutrient Delivery to the Illinois and Kaskaskia Rivers

The Conservation Reserve Enhancement Program (CREP) was initiated as a joint federal/state program with the goal of improving water quality and wildlife habitat in the Illinois River basin. Based on numerous research and long-term data in the Illinois River basin, the two main causes of water quality and habitat degradations in major river corridors were known to be related to sedimentation and nutrient loads. Based on this understanding, the two main objectives of the CREP were to reduce the amount of silt and sediment entering the main stem of the Illinois and Kaskaskia Rivers by 20 percent; and to reduce the amount of phosphorous and nitrogen loadings to by 10 percent. To assess the progress of the program towards meeting the two goals, the Illinois Department of Natural Resources (IDNR) and the Illinois State Water Survey (ISWS) developed a scientific process for evaluating the effectiveness of the program. The process includes data collection, modeling, and evaluation.

The monitoring and data collection component consist of a program to monitor sediment and nutrients for selected sub-watersheds within the Illinois and Kaskaskia River basins and also to collect and analyze land use data throughout the river basins. To generate reliable data for small watersheds, the Illinois Department of Natural Resources funded the Illinois State Water Survey to establish a monitoring program to collect precipitation, hydrologic, sediment, and nutrient data for selected small watersheds in the Illinois and Kaskaskia River basins that will assist in making a more accurate assessment of sediment and nutrient delivery. The Illinois River basin (IRB) has five small watersheds monitoring stations for intensive monitoring of sediment and nutrients within the Spoon and Sangamon River watersheds. Three stations are located in the Spoon River watershed which generates the highest sediment per unit area, while the Sangamon River watershed, the largest tributary watershed to the Illinois River and delivers the largest total amount of sediment, has 2 monitoring stations. The four small watersheds selected for intensively monitoring sediment and nutrient stations in the Kaskaskia River basin are located within the Crooked Creek, North Fork Kaskaskia River, Hurricane Creek and Shoal Creek watersheds.

The five Illinois River Basin monitoring stations were established in 1999 and are the most detailed data available in the watershed. The Kaskaskia River basin monitoring stations were established in late 2013 after intense assessment and evaluation of many physical, geological, biological, land cover and CRP program data and information, as well as impacts of the 2012 drought. Progress reports for the Illinois and Kaskaskia River basins presents the data collected and preliminary analyses for each of the monitoring stations.

Previous progress reports have presented preliminary evaluation of available long-term data from different sources along with the most recent data from the Illinois River Basin CREP monitoring program. The long-term data included statewide nutrient information from the IEPA, suspended sediment data from the USGS and ISWS, precipitation and hydrology analyses and land cover information. This type of analyses will place the current CREP contract easements and monitoring data into a long-term context to establish trends and observed changes in nutrient and sediment loadings between IRB tributary watersheds. In 2017, the ISWS was in the process of updating and analyzing this data and anticipate results will be available in 2018. The preliminary data remains in the progress report until next years update. Also, since 2014 the ISWS has been developing new hydrologic and water quality models for the major watersheds of the Illinois River Basin to assess the impacts of conservation measures on reduction of sediment and nutrient loading in streams and rivers. This has involved updating each IRB major tributary watershed with a standalone hydrologic and nutrient/sediment model with incremental calibration for sediment and nutrient when data becomes available. The IRB CREP monitoring program is supplying much of the data for the Spoon and Sangamon River watersheds. Each CREP monitoring watershed now has a watershed model and preliminary calibrations and trends analyses are presented in the progress report. The Kaskaskia River basin hydrology, sediment, and nutrient monitoring has completed a fourth year of data collection and continue to exhibit somewhat different concentrations and yields between each watershed and in contrast to the Illinois River Basin monitoring results. Due to the four years of monitoring occurring during highly variable annual precipitation amounts and distributions, continued monitoring in future years will provide the climate variability needed to properly assess loadings and impact of CREP. It is anticipated in 2018 that the Kaskaskia River CREP monitoring watersheds will begin model development and trends analyses. *Please reference Appendix B for the Illinois River Progress Report and Appendix for the Kaskaskia River Progress Report*

Illinois Natural History Survey

Monitoring and Assessment of Aquatic Life in the Kaskaskia River for evaluating IDNR Private Lands Programs: Phase III (Progress Report for 7/1/2018-12/31/2018)

Project Objectives:
(1) Continue established monitoring program that provides a basin-wide assessment of status and trends for aquatic life in wadeable streams associated with varying percentages of the watershed area enrolled to Conservation Reserve Enhanced Program (CREP) (i.e., CREP rate) in the Kaskaskia River Basin; (2) conduct targeted surveys in reaches with less-disturbed watersheds to improve coverage along the gradient of CREP rate within the basin; (3) continue monitoring of key fish populations within the Kaskaskia River; (4) continue monitoring of paired streams associated with different CREP rate; (5) engage in collaborative effort with IDNR to identify watersheds for suitable for land-use manipulation; (6) provide technical support for IDNR's Private Lands Programs.

Background:

Summary of Work in Phase I (2013-2015)

A full account of the work completed in Phase I of this project can be seen in Metzke and Hinz (2017a). The primary objectives of Phase I focused on establishing a basin-wide assessment of status and trends of aquatic life in wadeable stream reaches, surveys in targeted stream segments which contain species with conservation status (*i.e.* focal reaches), and surveys at established Illinois State Water Survey CREP reaches (*i.e.* fixed site monitoring). In addition to the primary objectives the project supported two graduate student research projects investigating the relationships between CRP density and aquatic assemblages for fish assemblages and macroinvertebrate assemblages, respectively. A total of 144 reaches were surveyed in Phase I.

Summary of Work in Phase II (2016-2017)

The aim of Phase II was to continue monitoring and assessing aquatic life in the Kaskaskia Basin while expanding on the goals of the first phase of the project (Metzke, Hinz, & Beja, 2017b). The primary objectives of Phase II focused on continuing basin-wide assessment of status and trends of aquatic life in wadeable stream reaches, expand sampling efforts of focal stream reaches, and conduct additional monitoring of key populations in the basin. Key aquatic populations included adult aquatic insects, mussels, and fish species sensitive to sedimentation. During the reporting period of 2017 the total number of reaches over the five survey season (including Phase I and II) was 240 reaches.

Summary of Work Completed During Reporting Period (7/1/2018-12/31/2018):

Throughout the reporting period, efforts have continued to assess aquatic life in the Kaskaskia River Basin. In total, 40 wadeable stream sites were sampled in 2018 at base-flow conditions to evaluate fish assemblages, benthic macroinvertebrate assemblages, stream habitat, 3 and water chemistry throughout the basin. The length of each sampling site was established based on a length of 20-times mean wetted width (minimum 100m, maximum 300m). The 40 sites chosen for surveys fell into one of three categories (20 basin-wide sites, 16 paired sites, and 4 less-disturbed sites) that correspond with the three of the project objectives (Figure 1).

Fish sampling using a single-pass electrofishing (e-seine or backpack) technique was conducted at 39 of the 40 sites. The single site we were un-able to sample fish was a previously established paired site with a dry stream-bed sampling season. At all sites fish were identified to species then released back to the stream. In addition, length and weight measurements of individuals from focal species selected for sensitive species monitoring were recorded at paired sites (Table 1).

Thirty-nine macroinvertebrate samples were collected using a standard multihabitat, 20-jab sampling approach (Barbour et al. 1999). The samples are currently being sorted for a 300-organism fixed-count subsample to be sent to a certified external lab for taxonomic identification. EcoAnalysts, Inc. have been contacted to conduct the identification work for comparability to samples of the previous phases of the project.

Habitat assessments were conducted at each of the 40 sites during the 2018 sampling season using the Qualitative Habitat Evaluation Index (QHEI; Ohio EPA 2006) and the Illinois Habitat Index (IHI; Sass et al. 2010). The QHEI was developed by the Ohio EPA to provide a qualitative assessment of the habitat characteristics that are important for supporting fish communities. The IHI was developed to provide a qualitative evaluation of physical habitat and the response to human degradation in upstream and local watershed, while also taking into account regional differences throughout Illinois. The combination of the QHEI and IHI assessments aids our understanding of the habitats available to aquatic life and how those habitats are changing through time.

Water chemistry parameters (dissolved oxygen, specific conductance, turbidity, pH, nitrate nitrogen, total reactive phosphorus, ammonia nitrogen, and temperature) were measured during base flow conditions at 39 of the 40 sites. These parameters were collected through a combination of Hach field test kits and a handheld water quality meter. In addition to point sampling, 19 water temperature loggers were deployed for continuous temperature sampling in select basin-wide

(n=15) and paired reaches (n=4). Sites that were sampled after August did not have a temperature logger installed because we are interested in assessing mean temperatures during peak summer base flow conditions (i.e. July and August). Temperature loggers will be retrieved in early 2019 and the recorded data will be used to assess mean thermal regimes.

Objective 1- Basin-wide Assessment

To evaluate the current physiochemical and biological status of streams in the Kaskaskia River Basin stream segments were selected using a stratified random sampling technique (stream size and sub-basin as strata). Stream size was given two strata levels based on link number: small (link ≤10) and large (link ≥ 11). Five stream segments (three small and two large) were randomly chosen in each of the four United States Geological Survey (USGS) Hydrologic Unit Code 8 (HUC8) scale sub-basins of the Kaskaskia River Basin. One sampling site was established in each of the selected stream segments based on a length of 20-times mean wetted width (minimum 100m, maximum 300m). During the 2018 sampling season, these 20 basin-wide status sites were surveyed for fish, benthic macroinvertebrates, habitat, and water chemistry parameters (Figure 1).

Objective 2- Less-disturbed Watersheds

To improve our understanding of the gradient of land-use within Kaskaskia River Basin, stream segments were selected with high (>50%) less-disturbed land use types for total upstream watershed. Land-use data from Great Lakes Regional Aquatic Gap Project (Holtrop et al. 2005) was used to compile a list of target stream segments in which total upstream watershed had 50% or more less-disturbed land use types. Less-disturbed land types includes all lands types that are not considered urban or agricultural (e.g. grassland, forest, etc.). A total of 4 less-disturbed sites were sampled within base-flow conditions of the reporting period.

Objective 3- Monitoring of Focal Fish Populations

The eleven target species were chosen in Phase II to serve as potential indicators of the effects of conservation practices in the basin due to their sensitivity to sedimentation (Table 1). During the 2018 sampling season, length and weight measurement of these focal fish species were recorded at 15 of the 16 paired sites to continue sensitive species monitoring. Greater than 1,000 individuals from the eleven focal species were measured in 2018. Length and weight relationships are frequently used as an estimate of fish condition (Bolger and Connolly 1989). These length and weigh data will be used to monitor differences in the condition of sensitive species along gradient of conservation practices in the Kaskaskia River Basin and how the condition of those species in the basin is changing throughout time.

Objective 4- Continue monitoring of paired streams associated with different CREP rate.

To continue monitoring paired streams that have variant local watershed CREP rates the 8 pairs of reaches originally selected in Phase II (Metzke et al. 2017b) were revisited in 2018. Surveys to collect fish, benthic macroinvertebrate, habitat, and water chemistry data were conducted at 15 of the 16 total sites. The single site at which full surveys were not conducted had a dry stream bed during the sampling season therefore only partial habitat data could be collected. Combined with data from previous years, the paired sites data give us a good opportunity to investigate the temporal variation and trends among and between paired sites of the Kaskaskia River Basin. .

Objective 5- Engage in collaborative effort with IDNR to identify watersheds for suitable for land-use manipulation.

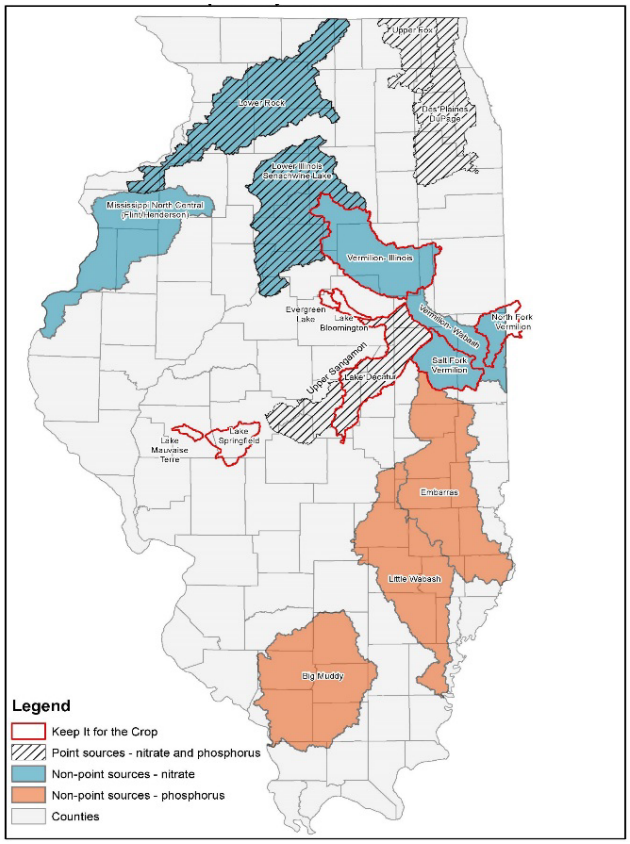
During the reporting period we have identified that more information about conservation practices in the Kaskaskia River Basin beyond CRP and CREP need to be understood and accounted for while investigating potential watersheds for manipulation. There are many alternative programs available in the state of Illinois including but not limited to the Conservation Stewardship Program (CSP), Environmental Quality Incentives Program (EQIP). Agricultural Conservation Easement Program/Wetlands Reserve Program, Illinois Conservation Practices Program (CPP), and Illinois Headwaters Invasive Plant Partnership (HIPP). The more 5 that is known about adoption of these alternative conservation practices in the Kaskaskia River Basin the better we will understand the interactions between conservation practices as a whole and the effects on aquatic life. If we want the land-use manipulation study to have the best opportunity to see an effect on aquatic life a complete picture of potential drivers of change in aquatic life is necessary.

Objective 6- Provide technical support for IDNR's Private Lands Programs.

The Technical Support component of this project is designed to assist with the identification of critically necessary conservation easements and site design for practice information statewide, and to interpret mapping information and identify priority areas for permanent easement acquisition by the Department of Natural Resources' (IDNR) Division of Private Lands and Watersheds (PLW) and partnering programs (Federal and State Conservation Programs). We provide work products that allow for rapid access to geospatial information and assessments of physical site characteristics such as soils, landcover, topography, and hydrologic information to identify sites to be restored and protected through easement or acquisition. Private land program databases were updated and integrated with new data to be used for CREP core activities. Farm Service Agency Conservation Priority Areas and Illinois Wildlife Action Plan Focal Areas were used to identify priority areas for CREP actions. Data were provided to the IEPA to facilitate analyses within the Illinois Nutrient Loss Reduction Strategy.

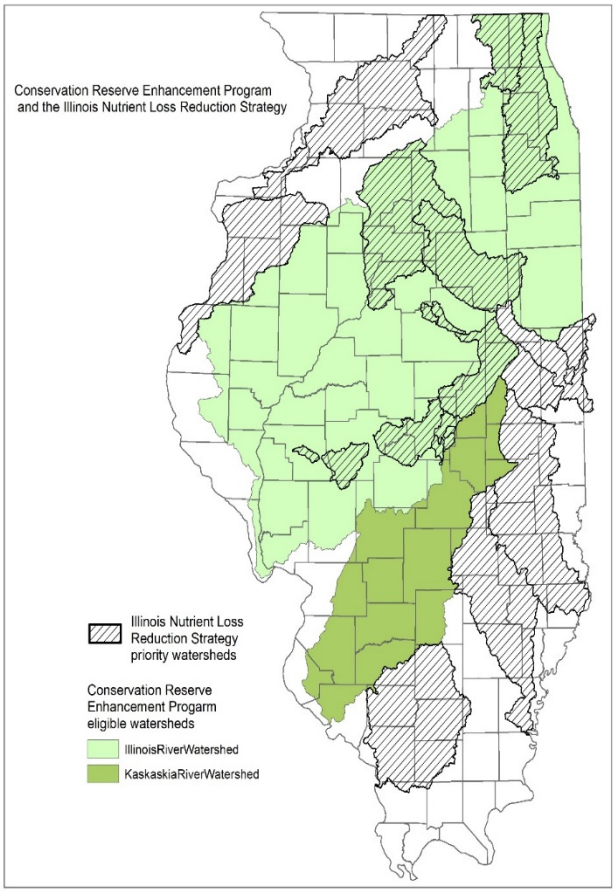
Illinois Nutrient Loss Reduction Strategy and CREP

Both point and non-point sources of nitrogen and phosphorus are added to the streams and rivers of Illinois, with these nutrients being transported to the Mississippi River and the Gulf of Mexico and contributing to the Gulf Hypoxia. These nutrients spur algae blooms that deplete oxygen levels, hinder recreation, and threaten public health. Nutrient pollution can also degrade drinking water quality and require cities to install costly treatment equipment. The Illinois Nutrient Loss Reduction Strategy (Illinois NLRS) is a framework for using science, technology, and industry experience to assess and reduce nutrient loss to Illinois waters and the Gulf of Mexico. The Strategy directs efforts to reduce nutrients from point and non-point sources in a coordinated (primarily voluntary) and cost-effective manner. The full strategy can be found through the following link: http://www.epa.illinois.gov/topics/water-quality/watershed-management/excess-nutrients/nutrient-loss-reduction-strategy/index



Illinois NLRS Priority Watersheds

Illinois consists of more than 22 million acres of corn and soybeans (60 percent of the state's land area). The goal of the Illinois NLRS is for farmers to select and apply the most beneficial practices for any given field. These practices are based on the science assessment and are those deemed by the Illinois NLRS Policy Working Group to have the greatest potential impact based on available research. The specific suite of practices appropriate for any given field will depend on many factors including soil characteristics, landscape position and hydrology, and current cropping and management practices. The NLRS has identified 12 Measures that would address nutrient reductions. Of those, Measure 9-11 can be accomplished through CREP.



NLRS Priority Watersheds and CREP eligible watersheds

The NLRS 12 "Measures" include:

1. reduce N rate from background
2. nitrification inhibitor with fall fertilizer
3. two split applications of fall and spring
4. one spring-only application
5. three split applications
6. cover crops on tile drained
7. cover crops on non tile
8. bioreactors
9. **wetlands**
10. **buffers on crop land**
11. **perennial/energy/hay crops**

The Conservation Reserve Enhancement Program (CREP) is driven by locally-led conservation efforts and employs a variety of Best Management Practices (BMPs) to protect and restore riparian corridors. The table below shows the CREP practices that were identified by the NLRS science assessment as Measures to be tracked with 2011 chosen by the Illinois NLRS working group as the baseline year. The acres listed are only for where the Federal CREP contract has expired, and they are solely on the State side of the CREP program.

	BMP	2011	2012	2013	2014	2015	2016	2017	2018
Measure 9									
CP9 and CP23	Wetland Acres	20	651	3,681	11,976	17,406	19,467	19,523	19,523
Measure 10									
CP21 and CP22	Buffer Acres	526	1,324	2,720	5,467	8,768	13,568	13,764	13,850
Measure 11									
CP2 and CP4D	Perenial/Energy Acres	0	7	84	1,622	2,107	4,395	4,670	4,718
	Total NLRS Acres	**546**	**1,981**	**6,484**	**19,065**	**28,281**	**37,430**	**37,956**	**38,091**

The CREP practices identified for the NLRS do not represent all CREP practices that could result in nutrient loss reduction. CREP has several other practices that are not identified as a contributing Best Management Practice at this time by the NLRS Science Assessment. This table below lists all CREP practices and acreages associated with CREP from the start of the program until 2018. The acres listed are only for where the Federal CREP contract has expired, and they are solely on the State side of the CREP program.

***acres refer to calculations done in GIS, and may vary slightly from the other acres in the CREP Annual Report. This is due to an on-going effort to map accurate CREP boundaries and acres, which are subject to change slightly again in subsequent reports as more accurate boundaries are mapped. The date column is the federal fiscal year when that ground became part of the State CREP easement.*

	CP 9 CP23	cumulative wetland acres	CP21 CP22	cumulative buffer acres	CP2 CP4D	cumulative perennial acres	Non NLRS crop acres CP11 CP12 CP3 CP3A	cumulative non NLRS acres	Additional Acres	cumulative additional acres
	Wetland acres		Buffer acres		Perennial acres		Other acres		ADD acres	
1999	0	0	0	0	0	0	9	**9**	5,031	**5,031**
2000	0	0	0	0	0	0	0	**9**	7,134	**12,165**
2001	0	0	17	17	0	0	0	**9**	7,892	**20,057**
2002	0	0	6	23	0	0	0	**9**	3,967	**24,024**
2003	0	0	0	23	0	0	0	**9**	303	**24,327**
2004	0	0	18	41	0	0	0	**9**	2,412	**26,738**
2006	0	0	0	41	0	0	0	**9**	201	**26,940**
2007	11	11	20	61	0	0	6	**15**	2,728	**29,668**
2008	0	11	46	107	0	0	0	**15**	2,382	**32,050**
2009	0	11	12	119	0	0	0	**15**		**32,050**
2010	0	11	83	201	0	0	0	**15**		**32,050**
2011	10	20	324	526	0	0	7	**22**	1,437	**33,487**
2012	582	602	799	1,324	7	7	9	**30**	2,821	**36,308**
2013	3,030	3,633	1,463	2,787	77	84	126	**156**	1,133	**37,441**
2014	8,296	11,928	2,747	5,534	1,539	1,622	978	**1,134**	1,084	**38,525**
2015	5,362	17,290	3,301	8,835	487	2,110	563	**1,697**	220	**38,746**
2016	2,061	19,351	4,800	13,636	2,288	4,398	1,718	**3,415**	51	**38,797**
2017	56	19,407	196	13,831	274	4,672	29	**3,444**	179	**38,976**
2018	0	19,407	86	13,918	49	4,721	7	**3,451**	107	**39,083**
	19,407		13,918		4,721		3,451		39,083	
	Total		**Total**		**Total**		**Total**		**Total**	

PARTNER UPDATES

Illinois Enviromental Protection Agency

One of the key missions of Illinois EPA is to monitor and protect the water resources of Illinois; these resources are relied upon for drinking water, fishing, transportation and recreational use and other environmental and economic benefits. One of the most dramatic improvements in water quality that Illinois EPA has documented has taken place on the Illinois River.

Illinois EPA has seven Ambient Water Quality Monitoring Sites on the main channel of the Illinois River and eight on the Kaskaskia River. Water chemistry is collected at these sites nine times per year. There are approximately 475 Intensive Basin Survey Sites in the Illinois and Kaskaskia River watersheds. These sites are monitored "intensively" once every five years. The monitoring includes water chemistry, macro-invertebrates, fish, habitat, and at some sites fish tissue contaminants are collected. This information is cooperatively collected with the Illinois Dept. of Natural Resources, a partnership that began many years ago and continues annually.

The monitoring shows that the Illinois River mainstream water quality has improved significantly since the passage of the Federal Clean Water Act in 1972. Early improvements were due primarily to point source controls, such as additional treatment requirements and limits on discharges from wastewater treatment plants. The majority of water quality improvements over the last twenty years have been from the implementation of nonpoint source management programs that reduce urban and agricultural runoff, and programs such as CREP. Since 1999, more than $2,522,000 of Section 319 grant funds have been spent to hire and train personnel responsible for outreach and the enrollment process. The benefits derived through this financial support was not only efficiency in the sign-up process to increase CREP enrollment, but it also allowed the existing SWCD and NRCS staff to continue to implement the other conservation programs so desperately needed to improve water quality in the Illinois and Kaskaskia River watersheds.

As reported by the Illinois EPA in their 2016 Integrated Report, of the *stream miles assessed* in the Illinois River Basin for Aquatic Life Use Support attainment, 67.8% were reported as ―Good,‖ 27.6% as ―Fair,‖ and 4.6% as ―Poor.‖ This compares to statewide figures of 57.8% ―Good,‖ 37.3% ―Fair,‖ and 4.9% ―Poor.‖

Other Illinois EPA programs that complement CREP include:

Section 319: Since 1990, the Illinois EPA has implemented 331 Clean Water Act Section 319 projects within the Illinois and Kaskaskia River Watersheds. The Agency receives these federal funds from USEPA to identify and administer projects to prevent nonpoint source pollution. These projects include watershed management planning; best management practices implementation and outreach efforts. Illinois EPA has dedicated over $79 million with another $69 million of local and state funds for total project costs of over $148 million towards these projects to help improve the health of the Illinois and Kaskaskia Rivers, their tributaries and ultimately the Mississippi River and Gulf of Mexico. Hundreds of conservation practices have been installed in the Illinois and Kaskaskia River watersheds by dozens of our partners through the Section 319 program. Traditional practices such as terraces and waterways are dotting the landscape along with porous pavement parking lots, green roofs and miles of rural and urban stabilized streambank.

Since 1990, the 319 Nonpoint Source Program, through on the ground implementation, can show load reductions in the Illinois and Kaskaskia River watersheds of: 610,331 lbs. of nitrogen, 255,665 pounds of phosphorus, and 210,128 tons of sediment per year, each and every year since the Best Management Practices were implemented as a result of 319 grant projects between Illinois EPA and our local partners, in both the private and government sectors. The Illinois EPA invites you to visit https://www2.illinois.gov/epa/topics/water-quality/watershed-management/nonpoint-sources/Pages/success-stories.aspx for a sample of Illinois‘ 319 success stories.

Illinois Green Infrastructure Grants (IGIG): Since 2011, the Illinois EPA has implemented 31 IGIG projects within the Illinois and Kaskaskia River watersheds. IGIG is administered by the Illinois EPA. Grants are available to local units of government and other organizations to implement green infrastructure best management practices (BMPs) to control stormwater runoff for water quality protection in Illinois. Projects must be located within a Municipal Separate Storm Sewer System (MS4) or Combined Sewer Overflow (CSO) area. Funds are limited to the implementation of projects to install BMPs. Illinois EPA has dedicated over $15 million with another $6 million of local funds for total project costs of over $21 million towards these projects to help improve water quality in the Illinois and Kaskaskia River watersheds.

Construction Site Inspection Program: Illinois EPA continues to implement a program in partnership with nineteen soil and water conservation districts covering twenty-one counties. Those partners located in the Illinois and Kaskaskia River watersheds include the Champaign, DeKalb, Jersey, Kane/DuPage, Kankakee, Kendall, Knox, Macon, Madison, McHenry/Lake, Monroe, North Cook, Peoria, St. Clair, and Will/South Cook County, Soil and Water Conservation

Districts. District staff complete on-site NPDES Construction Stormwater Permit inspections and provide technical assistance in implementing best management practices to minimize runoff to nearby water bodies. This program is a natural fit for properly developing acreage that does not qualify for CREP.

Total Maximum Daily Load (TMDL): TMDLs are a tool that Illinois EPA uses to restore impaired watersheds so that their waters will meet Water Quality Standards and Full Use Support for those uses that the water bodies are designated. A TMDL looks at the identified pollutants and develops, through water quality sampling and modeling, the amount or load reductions needed for the water body to meet its designated uses. Statewide, USEPA has approved a total of 415 TMDLs for 614 causes of impairment. Illinois EPA continues to develop TMDLs on impaired waterbodies.

Partners for Conservation: A total of 72 lake monitoring (study) or protection/restoration projects have been conducted in the Illinois and Kaskaskia River watersheds via the Illinois EPA's Illinois Clean Lakes Program and Priority Lake and Watershed Implementation Program. Over $11.8 million of local and state funds have been allocated for these efforts.

Excess Nutrients: A High Profile Water Quality Issue

The impact of excess nitrogen and phosphorus in rivers, lakes, streams and the Gulf of Mexico has become a very high profile water quality issue. Under the right conditions, nutrients can cause excessive algal blooms, low oxygen and nuisance conditions that adversely impact aquatic life, drinking water and recreational uses of the water. The Illinois EPA has identified many waterbodies in the state with these problems.

Sources of nitrogen and phosphorus include municipal wastewater treatment systems, urban stormwater, row crop agriculture and livestock production, industrial wastewater, combustion of fossil fuels and natural sources. In other words, most aspects of modern society contribute to this pollution problem. The proportion of loading to a particular waterbody from these sources varies from watershed to watershed, with point sources and urban storm water being most important in urbanized watersheds and row crop and/or livestock production being predominant contributors in agricultural watersheds.

Illinois EPA has several on-going efforts addressing nutrients. In July of 2015 Illinois EPA, Illinois Department of Agriculture and a designated Nutrient Loss Reduction Policy Workgroup submitted to U.S. EPA Illinois' Nutrient Loss Reduction Strategy (Strategy) document that provides an implementation strategy to reduce nutrient losses from Illinois. The document identifies eleven priority watersheds for the reduction of nitrogen and/or phosphorus from point and/or nonpoint sources. Five of these watersheds are in the Illinois River Basin. The Strategy also identifies eight watersheds that are considered Keep It for the Crop (KIC) Nutrient Priority Watersheds. Six of the eight designated watersheds are in the Illinois River Basin. Each of these watersheds has a Total Maximum Daily Load developed or being developed for one or two nutrient pollutants (nitrate and total phosphorus). The Illinois EPA invites you to visit http://go.illinois.edu/NLRS to examine the complete Illinois Nutrient Loss Reduction Strategy.

In conclusion, the Illinois and Kaskaskia River basins are a valuable resource that we are working hard to protect and restore. Illinois EPA will continue long-term monitoring of the river basins and will continue to pursue funds to help implement water quality restoration and protection projects and to work with citizen groups, local governments, and industry to continue the progress we all have made.

Current Management Approaches and Issues

TMDL load limits are required to be implemented through National Pollutant Discharge Elimination System permits, which address point sources—municipal and industrial wastewater dischargers. Management of non-point source pollution is through voluntary implementation of best management practices (BMP) contrary to point sources which are regulated through permit limits.

Cost-share incentives to implement/install BMPs include federal Conservation Reserve Program and state Conservation Reserve Enhancement Program, state Partners for Conservation Program, various Farm Bill conservation programs and Section 319 non-point source management grants. There are various other efforts through state agricultural groups, industry and non-profit organizations to promote the use of agricultural BMPs.

Available data indicate that, for the most part, Illinois producers are not over-applying fertilizers or manure and that the traditional suite of conservation practices will not be adequate to achieve such large reductions. Absent the development of an economically viable third crop such as a perennial for biofuels, the costs to significantly reduce nutrient losses from agriculture are estimated to be billions of dollars.

New and expanding major (one million gallons per day or greater design flow) municipal sewage treatment plants and some sewage treatment plants discharging to certain lake watersheds are required by Illinois Pollution Control Board

regulations to limit their effluent discharge of total phosphorus to 1.0 mg/L on a monthly average basis. Plants currently achieving this level of phosphorus reduction represent 9% of the approximately 900 municipal discharges in the state. However, of the 214 major municipals discharges, whose effluent constitutes a large majority of the phosphorus loading from point sources, more than 25% are required to remove phosphorus. Requiring phosphorus removal from the minor facilities would be very costly for customers on a per capita basis and would represent a relatively small portion of the total point source phosphorus discharged. Therefore at this time minor facilities will not be targeted for reducing phosphorus discharge.

What U.S. EPA Expects

U.S. EPA expects states to establish numeric water quality standards for phosphorus and nitrogen and to carry out the other pieces of the Clean Water Act framework, as appropriate. U.S. EPA's Inspector General issued a finding in 2009 that U.S. EPA had not done enough to get state numeric nutrient water quality standards established. In response, U.S. EPA has developed a corrective action plan which includes a commitment to identify states where federal promulgation of nutrient water quality standards is required. U.S. EPA has been petitioned and sued by various environmental groups for failure of states to establish numeric nutrient standards, so there is mounting pressure on U.S. EPA and states to address nutrients by developing numeric nutrient water quality standards.

States have concerns on the issue of numeric nutrient water quality standards. They raise two main points:

1. There is not a straightforward relationship between nutrient concentration in the water and adverse effects, so a statewide, one size fits all, standard that meets the test of scientific defensibility is almost unachievable; and
2. The Clean Water Act programs are effective for point sources but do not assure reductions from non-point sources that are often the predominant contributors of nutrients in a particular watershed.

Through Illinois' Nutrient Loss Reduction Strategy the Illinois EPA has continued its commitment to using a science based approach to developing water quality standards. A Nutrient Science Advisory Committee has been convened to guide the development of nutrient criteria that helps protect aquatic life in Illinois' streams and rivers. It is comprised of scientific experts nominated by the stakeholder sectors represented in the Illinois Nutrient Loss Reduction Strategy Policy Working Group. Illinois EPA may propose numeric nutrient criteria to the Illinois Pollution Control Board in a rulemaking process based on the findings and determinations of the committee.

Illinois Department of Agriculture

The Illinois Department of Agriculture (IDOA) administers numerous soil and water conservation programs that produce environmental benefits in the Illinois River Watershed. In FY17, the Partners for Conservation Fund Program (PFC) Agricultural Components, administered by IDOA, has allocated over $387,500 to 22 counties that have significant agricultural acreage in the Illinois River Watershed for cost-sharing the installation of upland soil and water conservation practices. With the assistance from County Soil and Water Conservation Districts (SWCDs), the PFC provides up to 70% of the cost of constructing conservation practices that reduce soil erosion and protect water quality. Practices will be installed over the next 12 months. Conservation practices eligible for partial funding under the PFC include terraces, grassed waterways, water and sediment control basins, grade stabilization structures cover crops and nutrient management plans.

The IDOA provided grant funding to county SWCD offices in the Illinois River Watershed for operational expenses. Specifically, these funds were used to provide financial support for SWCD offices, programs, and employee' expenses. Employees, in turn, provided technical and educational assistance to both urban and rural residents in the Illinois River Watershed. Their efforts are instrumental in delivering programs that reduce soil erosion and sedimentation that ultimately protects water quality.

In an effort to stabilize and restore severely eroding streambanks that would otherwise contribute a large amount of sediment to the Illinois River and its tributaries, the IDOA, with assistance from SWCDs, administers the Streambank Stabilization and Restoration Program (SSRP). The SSRP is a component of the Partners for Conservation Fund Program that provides funds to construct low-cost techniques to stabilize eroding streambanks. A total of $40,000 has been allocated to stabilize and protect adjacent water bodies.

Illinois Department of Natural Resources

Natural Resources Damage Assessment (NRDA)

Tributary of Salt Creek & Sandra Miller Bellrose Nature Preserve - Williams Pipeline

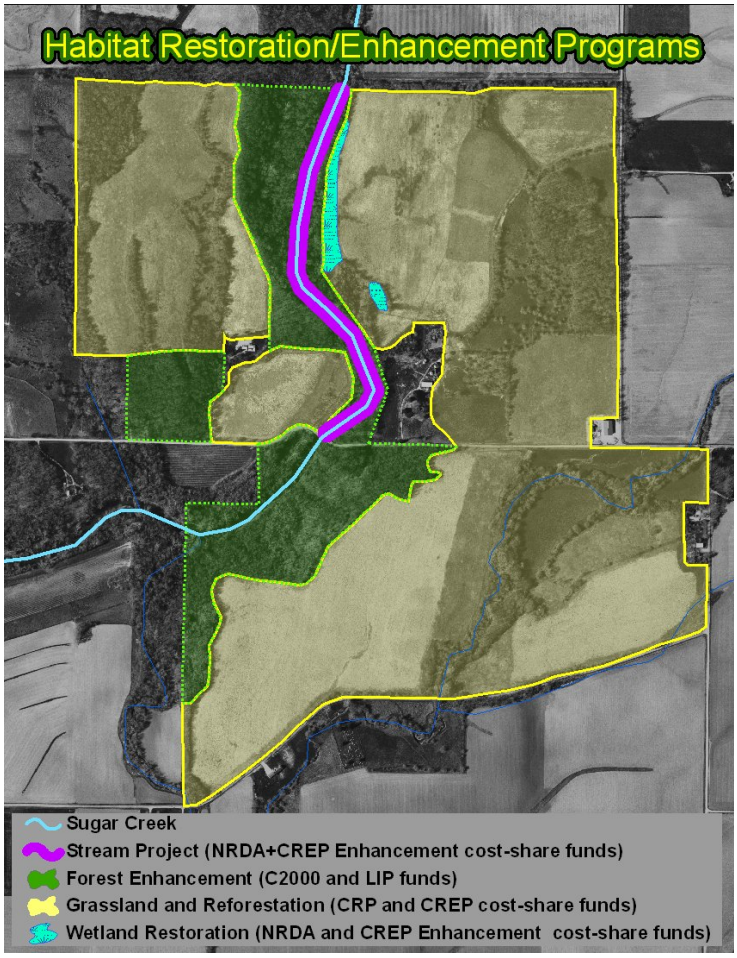
Williams Pipeline Company (Williams) owns and operated transmission pipelines that carry refined petroleum products through rural areas of Logan County. Sometime in early 1997, Williams had a leak of 10,000 gallons of gasoline and diesel oil located two miles south of Broadwell, Illinois. The release was discovered on March 27, 1997, and was identified by observance of a petroleum sheen on the surface of the small tributary to Salt Creek. The release was believed to have originated from external corrosion of a 67 year old section of the pipeline. The release adversely impacted the soil, groundwater and the unnamed tributary of Salt Creek. Approximately 21 acres of floodplain habitat were also affected, some of which were enrolled in the IDNR's *Illinois Acres for Wildlife Program*.

The Illinois Natural Resource Trustees completed a Natural Resource Damage Assessment (NRDA). Due to NRDA action taken by the IAG, IEPA, and IDNR, Williams agreed to compensate the public for interim losses resulting from the release of gasoline, diesel oil, and related hazardous substances. The matter was settled in November of 2002.

The Illinois Natural Resource Trustees proposed two in-stream restoration projects and two wetland restoration to compensate for injuries caused by Williams. Two final restoration plans (Phase I and Phase II) were drafted and funds were allocated to implement the restoration projects. Phase I activities included wetland enhancement, bank and log jam protection, boulder placement along Sugar Creek at the Sandra Miller Bellrose Nature Preserve (dedicated as a Nature Preserve in 2000). Phase II activities (near the injury) consisted of the installation of rock riffle grade control structures. Biological monitoring of the projects are ongoing. A report summarizing the monitoring activities and results will be made available in the future.

Links to:

Phase 1 Restoration Plan - 5/1/2007
Phase 2 Restoration Plan - 8/1/2007
Outdoor Illinois Article - Habitat Restoration Takes Some Mussel - 10/1/2008
Bellrose Stream and Wetland Restoration Monitoring Summary - 8/31/2015



CREP Habitat Enhancement Project - Bellrose

This program provides an opportunity for landowners who have permanent State CREP Easements to receive cost-share and technical assistance to maintain or improve the wildlife habitat quality on their easement. As suggested in the Conservation Reserve Enhancement Program (CREP) habitat monitoring program pilot study summary with this property, one of the monitoring techniques utilized will be to conduct site visits and use visual technology and observations to evaluate the overall habitat quality of CREP practices. With this approach invasive species can be identified, as well as, documenting the return of desirable species. When appropriate resources are available other quantifiable results can be collected by conducting biological surveys, such as but not limited to: fish, mussel, and vegetation surveys.

For the Bellrose instream project, the objective was to increase the habitat for aquatic wildlife such as smallmouth bass, mussels, and aquatic insect species such as pollution intolerant and high quality indicator species. For the Bellrose wetland project, the objective was to increase wetland habitat for wetland birds, aquatic and terrestrial insects, and amphibians and reptiles. For the grassland and forest projects the objective was to improve the habitat's natural quality.

To assess whether or not these projects are achieving their desired goals, monitoring has been conducted pre and post restoration implementation. The full NRDA report is still being finalized and will published in the next CREP annual report. For more information on the NRDA program visit https://www.dnr.illinois.gov/programs/NRDA

Plans are underway with U of I to hire a position leading a post monitoring effort of the wetlands to determine how well they are functioning and what type of adaptive management might be needed.

Bellrose Monitoring Schedule							
Calender Years:	2006	2007	2008	2009	2010	2012	2017
	Pre-Rest	Pre-Rest	1st Year	2nd Year	3rd Year	5th Year	10th Year
Instream:							
Habitat Survey		✓		✓	✓	✓	✓
Aquatic Insect Survey		✓		✓		✓	✓
Smallmouth Bass Survey	✓	✓	✓	✓	✓	✓	
Mussel Survey		✓			✓	✓	✓
Wetlands:							
Vegetation Survey with Hydrological Observations			✓		✓		
Insect Survey			✓	✓	✓	✓	
Herptile Survey			✓	✓	✓	✓	
Bird Survey	✓	✓	✓	✓	✓	✓	

Illinois Recreational Access Program (IRAP)

One of the more challenging problems facing Illinois and the Department of Natural Resources (IDNR) is to provide more public outdoor recreational access and opportunities in Illinois. To carry on our outdoor traditions, it is important to connect youth and families to land and opportunities. Privately owned property makes up 97% of Illinois land, ranking Illinois at 46th for public land recreation access. Despite this, Illinois hosts more than 323,000 hunters and 780,000 fishermen in addition to millions of other recreational users.

Through the Illinois Recreational Access Program (IRAP), the IDNR is increasing public recreational opportunities for the following activities:

- Youth and Adult Spring Turkey Hunting
- Archery Deer Hunting
- Small Game and Upland bird hunting
- Waterfowl Hunting
- Fishing (Ponds and Streambanks)
- Non-Motorized Boat Access on Public Waterways

Utilizing resources obtained from three separate grants from the US Department of Agriculture 's Voluntary Public Access and Habitat Incentive Program, the IDNR pays an annual stipend to landowners enrolling their property into IRAP. IRAP also prepares a habitat management plan and assists with the implementation of those plans for landowners. Emphasis is placed on developing a habitat management plan for the landowner and assisting with the implementation of the management plan. IRAP's success has led to the creation of two Habitat Strike Teams to work on private lands enrolled in IRAP.

The Illinois Recreational Access Program provides an additional option of on-the-ground habitat management for CREP easements. Currently there are 11 Illinois properties enrolled in both IRAP and CREP, both working towards private land conservation and restoration, and providing landowners access to the resources they need.

IRAP accomplishments:

- Leased approximately 19,600 acres in 49 counties.
- Provided thousands of hunting and fishing opportunities for youth and adults.
- Obtained more than 79 habitat management plans for IRAP leased properties.
- Habitat Management on more than 11,000 acres of IRAP leased property include,
    - Non-Native Invasive Species (NNIS) removal.
    - Aerial Spraying (NNIS).
    - Site Prep/Grassland management.
    - Prescribed Burning.
    - Timber stand Improvement.
    - Prairie Plantings.

Natural Resources Conservation Service (NRCS)

Conservation Accomplishments in the Illinois River Watershed

NRCS provides technical assistance to farmers, ranchers, and forest landowners as well as financial assistance through a number of Farm Bill conservation programs. Through the conservation title of the 2014 Farm Bill, NRCS provides cost-sharing for improved farming practices through the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP); and secures easements to protect agricultural lands and wetlands through the Agricultural Conservation Easement Program (ACEP). NRCS also has floodplain easements through the Emergency Watershed Protection Program (EWP).

For additional information on NRCS conservation programs, please visit www.nrcs.usda.gov.

US Fish and Wildlife Service

Partners for Fish and Wildlife

The US Fish and Wildlife Service Partners for Fish and Wildlife Program (PFW) has supported the Illinois River Conservation Reserve Enhancement Program (CREP) since its inception. The Midwest Region's PFW program assists with projects that conserve or restore native vegetation, hydrology and soils associated with imperiled ecosystems such as bottomland hardwoods, native prairies, marshes, rivers and streams. Collaborating with the Illinois and Kaskaskia River CREP has provided opportunities on a landscape scale for restoration, enhancement, and preservation of these natural habitats on private land. Benefits from this collaboration are the enhancements of privately owned land for Federal Trust Species, such as migratory birds, inter-jurisdictional fish, federally threatened or endangered species of plants and animals, as well as numerous state threatened or endangered species.

The primary contribution to the Illinois and Kaskaskia River CREP, by PFW, has been technical assistance through participation on the CREP Advisory Committee. In the field, PFW personnel coordinate with local NRCS, SWCD, and Illinois DNR staff as necessary on individual or groups of projects. Within the Illinois and Kaskaskia River Watersheds, individual Partners projects compliment CREP and other habitat programs. The PFW program provides a tool for restoration and enhancement of habitats on private lands that may not be eligible for other landowner assistance programs. PFW biologists review the full range of landowner assistance programs with each potential cooperator and refer landowners to

CREP or other USDA and Illinois DNR programs that best meet their objectives. In 2017, the PFW program completed 26 acres of wetland restoration, 21.6 acres of wetland enhancement and 250 acres of upland habitat restoration within the CREP area. We also wrapped up several wetlands at the end of October that are not reflected in this report as they fall under a new Fiscal Year for the federal government. In addition to the habitat conservation, our staff participated in 2 landowner workshops within the CREP boundaries. We have several wetland restoration projects planned in the upper reaches of the CREP watershed for the summer/fall of 2019.

For more information about the Partners for Fish and Wildlife Program please contact:
Michael_budd@fws.gov.

Illinois Farm Bureau

CREP is an important program in Illinois that provides cost-share incentives and technical assistance to farmers looking to address resource concerns, including nutrient loss reduction efforts and floodplain-related issues. Illinois Farm Bureau (IFB) continues to publicize and promote conservation programs through their statewide radio network, FarmWeek print publication and FarmWeekNow.com, as well as through the county Farm Bureau® system. Illinois Farm Bureau continues to voice support for conservation programs that help farmers meet environmental challenges.

Association of Illinois Soil and Water Districts (AISWCD)

The AISWCD, in partnership with the Illinois Department of Natural Resources and the Illinois Environmental Protection Agency, participated in a grant to provide funding, hire, and administer a team of six CREP Resource Specialists. This program provided monetary income for both AISWCD and Soil & Water Conservation Districts while also helping to preserve and enhance Illinois' natural resources.

The grant began in June 2012, but due to lack of state funding, all CREP Resource Specialists were laid off on May 31, 2016. No re-hire date was specified since funding did not seem likely in the near future. In 2017, state funds had still not been allocated for the CREP program, thus the partnership between AISWCD and the Illinois Department of Natural Resources was minimal during calendar year 2017. The CREP program did receive appropriations during the spring of 2018, however, the program has not yet been reopened.

We thank the Illinois Department of Natural Resources for their support over the years of this program and we look forward to continuing our partnership when the CREP program once again becomes available.

The Nature Conservancy

The Nature Conservancy, McLean County Soil and Water Conservation District, Natural Resources Conservation Service, Farm Service Agency, and the City of Bloomington have worked with landowners and producers in McLean County to implement Farm Bill programs that reduce nutrient loss from farm fields. Since 2013, nine wetlands have been installed in watersheds of the Mackinaw River in McLean County through enrollment in the Farmable Wetlands Program, Conservation Practice-39, under the Conservation Reserve Program. These wetlands are built specifically to capture and treat tile drainage water before entering adjacent waterways through denitrification by bacteria and uptake through vegetation. Additionally, two tile-treatment wetlands were constructed on City of Bloomington property in 2013 and 2014 near Lake Bloomington and Evergreen Lake. All wetlands are monitored by The Nature Conservancy, UIUC, and the City of Bloomington to determine their nutrient loss effectiveness. No wetlands were added in 2018, but continue to monitor others.

Advanced Conservation Drainage Training provides intensive classroom and hands-on training for drainage designers, contractors, farmers, farmer advisors, retailers, and conservation practitioners to better understand the implementation and functioning of edge of field practices such as constructed wetlands and saturated buffers. Topics include technical details on planning, designing and construction, as well as information on why wetlands are needed, the science behind why they work, the programs available to support implementation, and training on messaging, communication, and outreach to farmers on the benefits of a whole system approach to drainage. Attendees will attend three, two-day sessions, over a six-month period creating a strong network of knowledgeable experts who can share consistent information. This will help streamline the process for farmers and make practices like constructed wetlands a standard part of tile installation and farm

management. The trainings series will repeat and cover various parts of the state with a focus on local resource concerns, local conditions, and local partners. A primary goal of this series is to create a strong and varied network of professionals who are interacting with farmers around improved water management and support that network through ongoing communications, resources and discussion forums. The Advanced Conservation Drainage Training Steering Committee is made up of local partners, regional experts, researchers, and drainage industry practitioners and conservation advisors, who work to develop regionally relevant training topics, presentations, and demonstrations. In 2018, 20 trainees from across the state completed three sessions that included field demonstrations of wetland construction and installing saturated buffers.

National Great Rivers Research and Education Center

Providing boots-on-the-ground, the National Great Rivers Research and Education Center's (NGRREC) *Illinois CREP* Resource and Land Conservation Specialists *Initiative* focused their efforts within the newest CREP-eligible watershed—the Kaskaskia River basin. Working in partnership with soil and water conservation districts (SWCD's) and the Illinois Department of Natural Resources (IDNR), Land Conservation Specialists (LCS) with NGRREC were dedicated to outreach with private landowners about CREP, one-on-one attention with agricultural producers about CREP options and the CREP process, and technical assistance to complete CREP projects and manage CREP conservation easement parcels. NGRREC's *Illinois CREP Initiative* has ended. Once CREP is reopened the IDNR and NGRREC will discuss details to reinstitute the CREP Resource and Land Conservation Specialists initiative.