Illinois CREP

Annual Report 2021

October 1st, 2020 to December 31st, 2021

TABLE OF CONTENTS

INTRODUCTION

For over 20 years, Illinois Conservation Reserve Enhancement Program (CREP) has been a successful partnership between the U.S. Department of Agriculture (USDA), Farm Service Agency (FSA), the Illinois Department of Natural Resources (IDNR), and the Soil and Water Conservation Districts (SWCDs). CREP provides long-term environmental benefits by allowing up to 232,000 acres of eligible environmentally sensitive lands within the Illinois and Kaskaskia River Watersheds (Figure 1) to be restored, enhanced, and protected over periods ranging from 15 years to perpetuity.

In CREP, landowners enroll frequently flooded and environmentally sensitive cropland in a Federal CREP contract, with FSA. IDNR extends the environmental benefits of that Federal contract by enrolling the land into an Illinois CREP grant of conservation right and easement agreement (easement) for 15 years, 35 years, or in perpetuity beyond the expiration of the Federal contract. In exchange for voluntarily removing land from production, landowners received compensation to implement conservation practices.

The goals of CREP are to reduce sediment and nutrient runoff, improve water quality, and create and enhance critical habitat for fish and wildlife populations on private lands. As one of the oldest and most popular CREP programs in the nation, the CREP partnership has achieved restoration and long-term protection of over 90,000 acres in conservation easements. With over 90% of land in Illinois privately owned, programs like CREP are essential to effectively address important environmental issues.

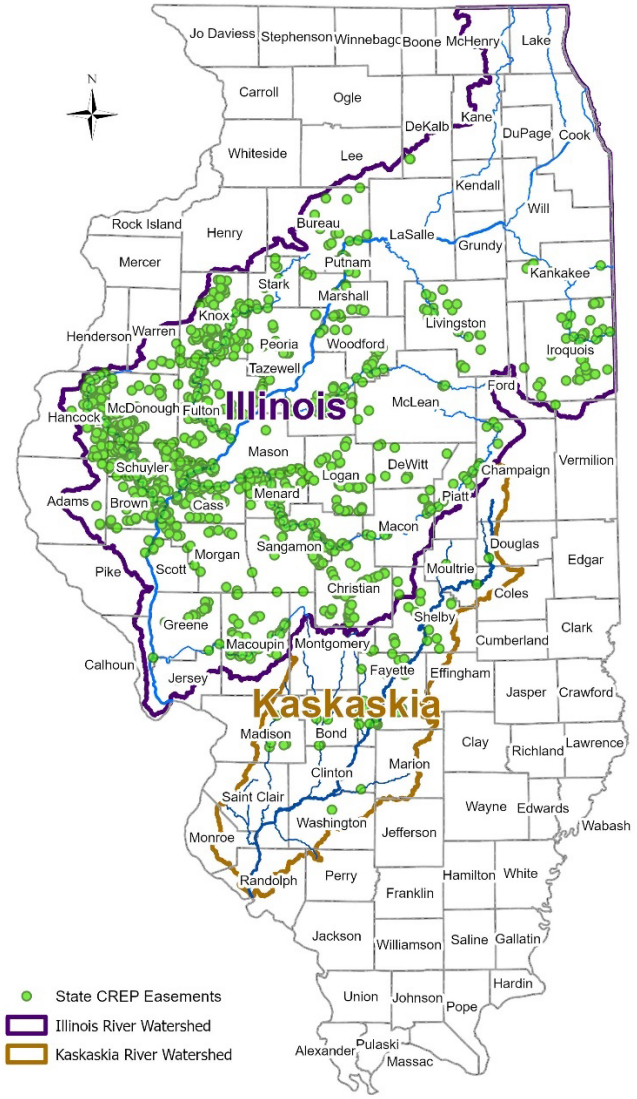


Figure 1. CREP eligible watersheds and executed easements.

ILLINOIS CREP ENROLLMENT

Illinois CREP was created through an agreement between USDA/FSA and the State of Illinois in March of 1998. Enrollments into the program began on May 1, 1998. Throughout the 20-plus year history of CREP, the CREP agreement has been amended several times to clarify terms, increase the number of practices offered, and expand the eligible area.

Enrollment in CREP has been overwhelmingly popular since the beginning of the program. During the first two years of the program, there were nearly 700 easements totaling more than 46,000 acres enrolled in the stateside of CREP. Currently, there are 1,323 CREP easements protecting 90,529 acres (Figure 1).

The CREP project area has grown significantly through the years (Figure 2). In 1998, only a portion of the Illinois River basin was eligible for CREP enrollments. By 2001, CREP expanded to the entire Illinois River basin, and by 2010, the Kaskaskia River basin was added to the CREP eligible acres.

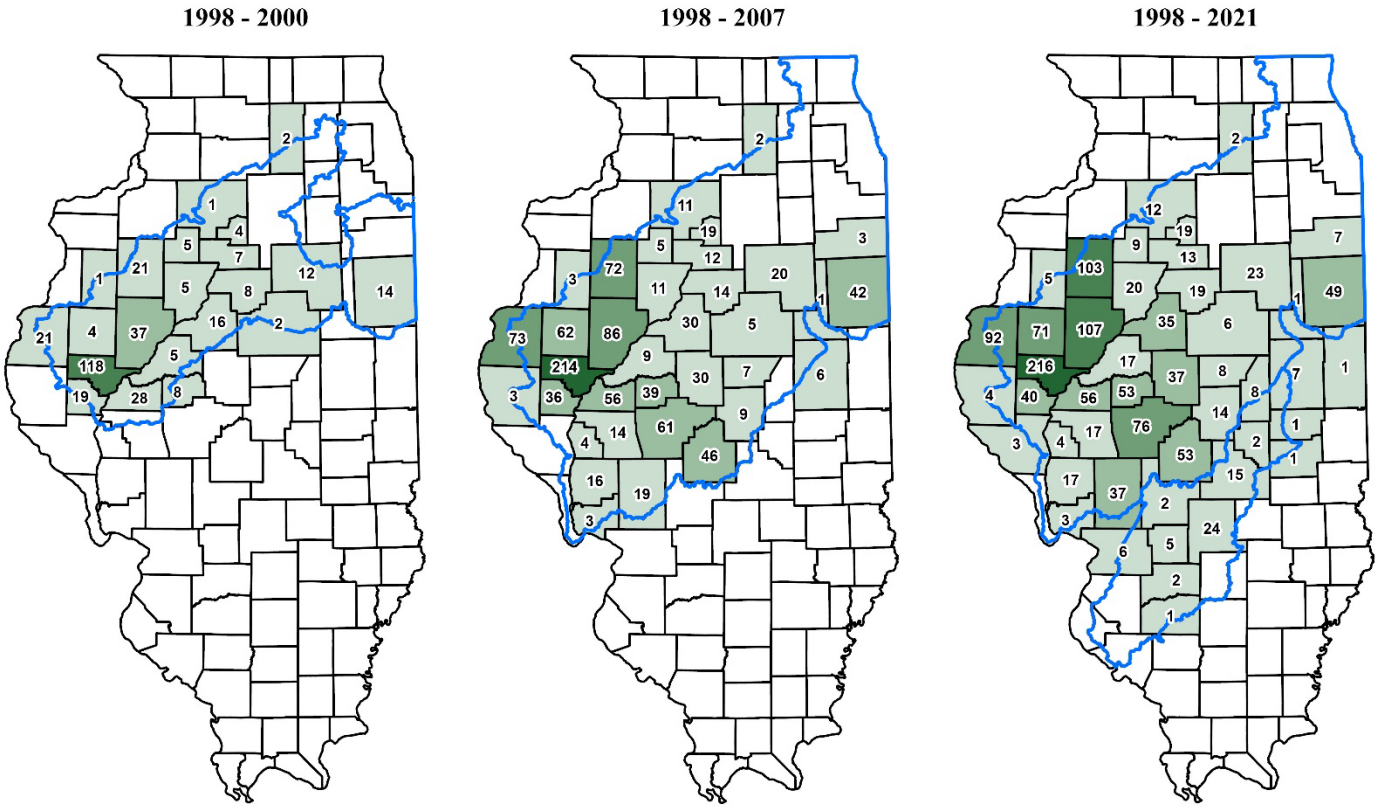


Figure 2. The Illinois CREP eligible areas and easements per county from 1998 through 2021.

Illinois CREP continues, in 2021, to be under an enrollment suspension. The suspension was originally enacted by IDNR and FSA on July 1, 2015 due to the lack of a state budget. After CREP funding was reinstated in late 2017, IDNR and FSA began the negotiation process to amend the terms of the CREP agreement. The negotiation process was delayed or stalled through the years due to IDNR staff changes, the release of the 2018 Farm Bill and subsequent regulations, and the COVID-19 pandemic. IDNR and FSA persevered through the challenges and executed the amended CREP agreement on May 26, 2021. With the completion of CREP agreement, both IDNR and FSA began the process to update policy and procedure that will reflect the updates made to the new Illinois CREP agreement.

PROGRAM EXPENDITURES

The CREP agreement details the formula determining the overall costs of the program. These costs include the following: CRP payments paid by USDA, easement payments paid by IDNR, cost-share reimbursement for conservation practices paid by USDA and IDNR, costs associated with the monitoring program paid by IDNR, and the aggregate costs of technical assistance incurred by IDNR for implementation and management of easements.

Per the CREP agreement, the State of Illinois must contribute 20% of the total program costs. Based on USDA reports, as of September 30, 2021, there were 64,235 acres enrolled in Federal CREP contracts, with an average soil rental rate of $260.80 per acre.[1] In 2021, IDNR contributed 25.65% of the total program costs (Table 1).

U.S. Department of Agriculture	
Number of Current Federal Contracts	4,184
Current Federal Acres	64,235
Total Life of Contract Rent (15 Yrs x $260.80)	$249,759,036.36
Cost Share	$21,077,916.31
USDA Total	**$270,836,952.67**
Illinois Department of Natural Resources	
Number of State Easements	1,323
Total State Protected Acres	90,529
Illinois State Enrollments	$71,572,168.41
Monitoring	$11,847,479.34
IDNR In-Kind Services	$10,016,883.65
IDNR Total	**$93,436,531.40**
Illinois CREP Summary 1998 - Sept 30, 2021	
Program Total	**$364,273,484.07**
% of IDNR Program Contribution	**25.65%**

Table 1. Financial contributions by IDNR and USDA from 1998 through 2021.

[1] CRP Monthly Summary – September 2021 – https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/Conservation/PDF/Summary%20September%202021%20CRPMonthly.pdf

LOCAL PARTNERSHIPS

Since CREP's inception, the Soil and Water Conservation Districts (SWCDs) have been the driving force of CREP on the local level. When enrollment is open, the local SWCDs assist landowners and IDNR by conducting many of the steps needed to execute a CREP easement. The SWCDs are also a key component in the management of executed CREP easements. SWCDs answer landowner questions about CREP, conduct monitoring checks, verify land ownership, and facilitate discussions with landowners and IDNR regarding conservation management. The superior dedication to local landowner's needs, and boundless commitment to conservation provided by the SWCDs, has led the Illinois CREP program to be one of the nation's premier examples of interagency cooperation and success.

CONSERVATION RESOURCE SPECIALISTS

In January of 2020, through a partnership with Illinois Natural History Survey (INHS), six Conservation Resource Specialists (CRSs) were hired to provide "on the ground" promotion of conservation goals and develop relationships between partner agencies, landowners, and the scientific community.

The CRSs spent the first half of the year training and familiarizing themselves with every aspect of CREP and conservation related to agriculture in general. The training quickly evolved into collaboration and implementation of new Conservation Management Plans (CMP) to be written for every existing (and future) easement. These CMPs were created to address the evolving conditions of natural resources and conservation practices, and to address the overall goals and management of the property - ensuring the continued success and progression of long-term conservation planning needs. At the time this report was compiled, 30 CMPs had been written. This effort compliments the CRS's additional work supporting several County SWCDs for their regular compliance monitoring of each easement.

LOOKING FORWARD

Changes implemented in the amended CREP agreement will necessitate changes to IDNR's CREP Administrative Rules. The Administrative Rule process ensures that the State's General Assembly is adequately informed of how laws are implemented and facilitates public understanding of rules and regulations through a bipartisan legislative oversight committee called the Joint Commission on Administrative Rules (JCAR)[2]. The rulemaking process will involve a public comment period and review and approval from JCAR. It is anticipated the CREP Administrative Rules will complete this process in 2022.

To prepare for CREP's eventual reopening, IDNR CREP staff will develop, during 2022, training for SWCDs on CREP easement management and enrollment. It should also be noted that IDNR is working to create a database for facilitating SWCD offices to easily transmit new CREP enrollment applications and other required documents. Additionally, this will allow the IDNR CREP staff to shorten the length of time from application to easement execution.

CREP easement management will continue to ramp up throughout 2022. The CRSs will continue to create CMPs, and the SWCDs and CRSs will continue to conduct onsite monitoring visits on CREP easements throughout the state. IDNR expects to have one-third of all easements monitored by the close of 2022.

[2] https://www.ilga.gov/commission/jcar/

MONITORING PROGRESS TOWARD ACHIEVING CREP GOALS

IDNR has partnered with the Illinois State Water Survey (ISWS) and the Illinois Natural History Survey (INHS) to evaluate and more accurately monitor the effectiveness of CREP in Illinois. An update on the progress of the three monitoring programs in 2021 can be found below.

Illinois Natural History Survey

Monitoring Aquatic Life in the Illinois and Kaskaskia River Basins for evaluating IDNR Private Lands Programs: Phase IV

Throughout the reporting period, the Illinois Natural History Survey (INHS) has continued efforts to monitor the impacts of CREP on aquatic life in Illinois. A total of 29 wadeable stream sites were sampled during base-flow conditions to evaluate fish assemblages, benthic macroinvertebrate assemblages, stream habitat, and water chemistry in the Kaskaskia and Illinois River Basins (*Figures 1 & 2*). The length of each sampling site was standardized to a 100m reach for better comparability between sampling sites. The 29 completed sites for monitoring surveys fell into multiple categories that correspond with project objectives (17 Aquatic Life Goal Monitoring sites, 9 sites co-located with Illinois State Water Survey monitoring stations, and 3 less-disturbed sites). With the addition of the sites sampled in 2021, a combined total of 366 streams monitoring surveys have been conducted since the onset of the aquatic life monitoring program.

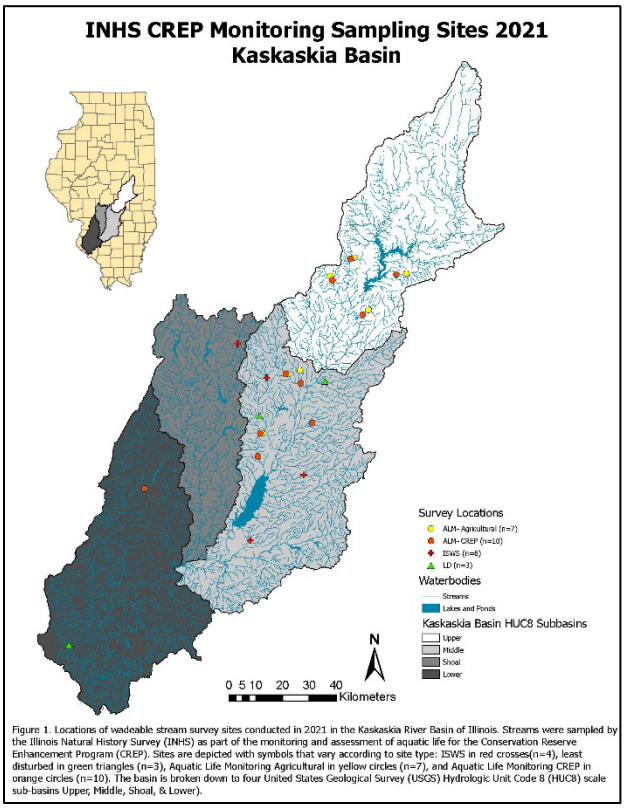


Figure 1. Locations of wadeable stream survey sites conducted in 2021 in the Kaskaskia River Basin of Illinois. Streams were sampled by the Illinois Natural History Survey (INHS) as part of the monitoring and assessment of aquatic life for the Conservation Reserve Enhancement Program (CREP). Sites are depicted with symbols that vary according to site type: ISWS in red crosses(n=4), least disturbed in green triangles (n=3), Aquatic Life Monitoring Agricultural in yellow circles (n=7), and Aquatic Life Monitoring CREP in orange circles (n=10). The basin is broken down to four United States Geological Survey (USGS) Hydrologic Unit Code 8 (HUC8) scale sub-basins Upper, Middle, Shoal, & Lower).

Fish community sampling using a single-pass electrofishing technique (e-seine or backpack) was conducted at each of the 29 monitoring sites. At each site, all fish were identified to species and the first 30 individuals of each species had additional metrics (length, weight, and condition) collected before releasing them back to the stream. Throughout the 29 sites over 8500 fish were identified and processed by our field crew in 2021. The maximum number of unique fish species identified at a single site was 23; the minimum number of unique species was 6.

Benthic macroinvertebrate sampling was conducted at each of the 29 sites using a standard multi-habitat, 20-jab sampling approach (Barbour et al. 1999, ILEPA 2011). Habitats for macroinvertebrate sampling were determined by the relative ratio of in-stream habitat (riffle, run, pool, or glide) within the established sampling site. The 2021 benthic macroinvertebrate samples are currently being sorted for a 300-organism fixed-count subsample to be sent to a certified external lab for taxonomic identification. Based on our current sorting progress, the taxonomy samples will be ready for delivery to the taxonomy laboratory in February 2022. EcoAnalysts, Inc. has been identified to conduct the identification work for comparability to samples in the previous phases of the project. During the reporting period, we shipped the macroinvertebrate samples from the 2020 sampling season to EcoAnalysts Inc. for taxonomic identification. The resulting data have been

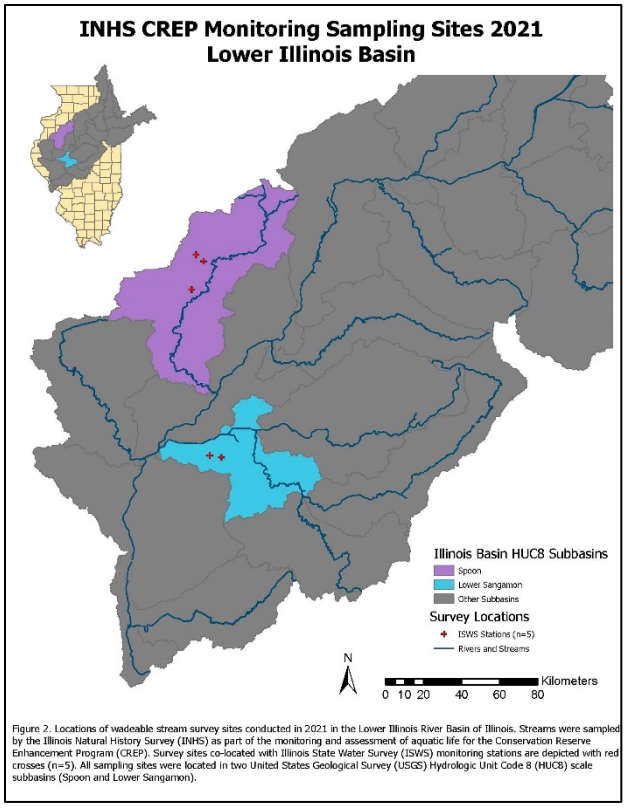


Figure 2. Locations of wadeable stream survey sites conducted in 2021 in the Lower Illinois River Basin of Illinois. Streams were sampled by the Illinois Natural History Survey (INHS) as part of the monitoring and assessment of aquatic life for the Conservation Reserve Enhancement Program (CREP). Survey sites co-located with Illinois State Water Survey (ISWS) monitoring stations are depicted with red crosses (n=5). All sampling sites were located in two United States Geological Survey (USGS) Hydrologic Unit Code 8 (HUC8) scale subbasins (Spoon and Lower Sangamon).

received and are currently being incorporated into an analysis evaluating the variation in macroinvertebrate community within the Kaskaskia River Basin from 2013-2020.

Habitat assessments were conducted at each site during the 2021 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 the upstream and local watershed, while also taking into account regional differences throughout Illinois. Both the IHI Score and the QHEI scores increase with better habitat quality. The maximum possible IHI score is 24, while the maximum QHEI score is 100. For the 2021 sampling season the minimum site score was 9 and maximum site score was 24 (mean = 19). The minimum QHEI score for all sampling sites was 30 and minimum was 67 (mean = 49.09). 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 each of the 29 sites. These parameters were collected through a combination of Hach field test kits and a handheld water quality meter (Hach HQ 20d). In-stream continuous temperature loggers were deployed at 25 of the 29 stream sites. Temperature loggers were not deployed at 4 of the sites due to a combination of lack of permission for installation and uncertainty of equipment recovery. In addition, stream discharge was collected where water depth and flow conditions were appropriate for the threshold of our flowmeter. At sites where no flow could be detected a depth profile was taken.

The Technical Support component of this project is designed to assist with the spatial identification of critically necessary conservation easements and site design for practice information statewide, 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). This GIS work falls into 3 main categories: maintain updated meta-data attributed GIS data; Develop GIS models to support PLW conservation goals; provide additional technical assistance and/or digital spatial solutions for PLW and agency partners. The technical support for PLW also includes the role of supervising field staff through developing and implementing the following: responsive conservation easement project management; conservation easement stewardship and monitoring; conservation planning and implementation; research information collection - human dimensions; capacity-building efforts; CREP outreach and education.

A summary of the ongoing work of the monitoring project and preliminary results were presented at the 2021 IL American Fisheries Society Meeting (Hostert et al. 2021, Lightening Talk Title: "Fish Community Trends in Tributaries of the Kaskaskia River"). In addition to the IL AFS meeting, data from the Aquatic Life Monitoring Program were requested and provided to Brian Metzke (State Aquatic Ecologist, IDNR) for two research projects.

References:

Barbour, M.T., J. Gerritsen, B.D. Snyder, and J.B. Stribling. 1999. Rapid bioassessment protocols for use in streams and wadeable rivers: periphyton, benthic macroinvertebrates, and fish, Second Edition. EPA 841-B-99-002. U.S. Environmental Protection Agency; Office of Water; Washington, D.C.

Hostert, L.E., L. Beja, and Y. Cao. 2020. Monitoring and assessment of aquatic life in the Kaskaskia River for evaluating IDNR private lands programs: phase III. INHS Technical Report 2021. University of Illinois, Champaign, IL.

Hostert, L.E., and Y. Cao. 2021. Fish Community Trends in Tributaries of the Kaskaskia River. Lightning talk session at the 2021 IL Chapter of the American Fisheries Society Meeting. Champaign, IL.

Illinois Environmental Protection Agency (ILEPA). 2011. Standard operating procedure for methods to collect aquatic macroinvertebrates from wadeable streams for biotic integrity assessments. Document Control Number 168. 8 pp.

Ohio EPA. 2006. Methods for assessing habitat in flowing waters: using the Qualitative Habitat Evaluation Index (QHEI). Ohio EPA Technical Bulletin EAS/2006-06-1. Groveport, OH.

Sass, L., L. C. J. Hinz, J. Epifanio, and A. M. Holtrop. 2010. Developing a multi-metric habitat index for wadeable streams in Illinois. Champaign, IL.

Illinois Natural History Survey

Monitoring Wildlife Benefits of Private-Lands Programs in Illinois: Evaluation Current Conditions and Results of Management Actions

Between mid-May and mid-July of 2021, we conducted 89 multi-species avian point counts and broadcast surveys at 50 randomly selected locations within 47 CREP sites. We performed broadcasts for Yellow-billed Cuckoos (*Coccyzus americanus*), Red-headed Woodpeckers (*Melanerpes erythrocephalus*), and Northern Flickers (*Colaptes auratus*), three Species in Greatest Need of Conservation (SGNC) in Illinois. We also sampled vegetation structure and composition once during the season. Sites were located in Brown, Fulton, Knox, McDonough, Menard, Sangamon, and Schuyler counties. Conservation practices sampled included CP4D, CP3A, CP23, and CP22, with an average easement size of 14 ha (range 3.2-78.6 ha). Vegetation types at survey locations were forest (41%), grassland (28%), and shrubland (31%). Changes in functional habitat from 2012 (7% forest, 44% grassland, and 49% shrubland) demonstrate the continued maturation of conservation plantings.

Birds on CREP sites
We observed 83 species of birds using CREP sites over the course of the 2021 breeding season. Below is a species list in order from greatest to lowest number of detections (with more than 20 detections during point counts):

Common Name	**Scientific Name**
Red-winged Blackbird	*Agelaius phoeniceus*
Indigo Bunting	*Passerina cyanea*
Common Yellowthroat	*Geothlypis trichas*
Northern Cardinal	*Cardinalis cardinalis*
Field Sparrow*	*Spizella pusilla*
Gray Catbird	*Dumetella carolinensis*
Brown-headed Cowbird	*Molothrus ater*
American Goldfinch	*Spinus tristis*
Warbling Vireo	*Vireo gilvus*
Eastern Wood-Pewee	*Contopus virens*
Eastern Towhee*	*Pipilo erythrophthalmus*
American Robin	*Turdus migratorius*
Downy Woodpecker	*Dryobates pubescens*
Tufted Titmouse	*Baeolophus bicolor*
Black-capped Chickadee	*Poecile atricapillus*
Red-bellied Woodpecker	*Melanerpes carolinus*
Mourning Dove	*Zenaida macroura*
Yellow-billed Cuckoo*	*Coccyzus americanus*
Red-eyed Vireo	*Vireo olivaceus*
Yellow-breasted Chat*	*Icteria virens*
Blue Jay	*Cyanocitta cristata*
Rose-breased Grosbeak	*Pheucticus ludovicianus*
House Wren	*Troglodytes aedon*
Song Sparrow	*Melospiza melodia*
American Crow	*Corvus brachyrhynchos*
Dickcissel*	*Spiza americana*
Baltimore Oriole	*Icterus galbula*
Cedar Waxwing	*Bombycilla cedrorum*

*indicates SGNC based on the Illinois Wildlife Action Plan

Other species in Greatest Need of Conservation for Illinois we detected in small numbers were: Acadian Flycatcher, Bald Eagle, Bell's Vireo, Brown Thrasher, Blue-winged Warbler, Chimney Swift, Eastern Meadowlark, Northern Bobwhite, Northern Flicker, Prothonotary Warbler, Red-headed Woodpecker, Ring-necked Pheasant, Willow Flycatcher, and Wood Thrush.

We found CREP sites in Illinois supported a greater density of birds than row crops. On average, easements supported 5.9 birds/ha (SD = 2.5, Min = 2.5, Max = 14.3) compared to 1.1 birds/ha in row crops and 2.3 birds/ha in no-till fields (VanBeek et al., 2014). For several SGNC found in both CREP and agricultural fields (Field Sparrow, Dickcissel, and Northern Flicker), our minimum density estimates indicated that the numbers of birds supported by CREP are at least 20 to 200 times greater than what would be supported by the same fields planted to row crops (Best et al. 1990). Broadcast surveys greatly increased detection of our three focal species and indicated they were present at many of our CREP sites at some point during the breeding season (Yellow-billed Cuckoos present at 90% of sites, Red-headed Woodpeckers 52%, and Northern Flickers 48%).

Vegetation

Changes in vegetation structure and composition between 2012-15 and 2021 indicated further habitat succession. Tree density and percent bare ground and leaf litter increased while percent live vegetation cover decreased for all conservation practices. Notably, several sites had become dominated by dense silver maple stands and had little to no ground cover, likely making them more susceptible to soil loss and runoff (Duan et al., 2020). It is important to consider how changes in ground cover, absent management action, will impact CREP soil conservation goals.

Literature Cited

Best, L. B. ., Whitmore, R. C. ., & Booth, G. M. . (1990). Use of cornfields by birds during the breeding season : The importance of edge habitat. *American M*, *123*(1), 84–99.

Duan, J., Liu, Y. J., Yang, J., Tang, C. J., & Shi, Z. H. (2020). Role of groundcover management in controlling soil erosion under extreme rainfall in citrus orchards of southern China. *Journal of Hydrology*, *582*(August 2019), 124290. https://doi.org/10.1016/j.jhydrol.2019.124290

VanBeek, K. R., Brawn, J. D., & Ward, M. P. (2014). Does no-till soybean farming provide any benefits for birds? *Agriculture, Ecosystems and Environment*, *185*, 59–64.

Illinois State Water Survey

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

The ISWS data collection program monitors streamflow, sediment and nutrients for selected headwater-watersheds within the Illinois and Kaskaskia River watersheds as well as assembles and analyzes land use data throughout the watersheds. The Illinois River Basin (IRB) has five headwater watershed monitoring stations, established in 1999, for intensive collection of streamflow, sediment and nutrients data within the Spoon and Sangamon River watersheds. Three stations are in the Spoon River watershed (Court, North and Haw Creeks), while the Sangamon River watershed, the largest tributary watershed to the Illinois River, has 2 stations (Panther and Cox Creeks). The four headwater watershed stations in the Kaskaskia River Watershed (KRW), established in 2013, intensively monitor streamflow, sediment and nutrient concentrations are in the Middle and Lower regions of the KRW (North Fork Kaskaskia River, Lost, Hurricane, and East Fork Shoal Creeks). Progress reports for monitoring in the IRB and KRW watersheds present the data collected in the completed processed water year (WY2020, October 1, 2019 – September 30, 2020) in context of period-of-record annual runoff and annual sediment & nutrient yields.

All nine stations monitor for continuous streamflow which is key in computing total mass (load) being delivered from the watershed upstream of the streamgaging station. Continuous stage readings are recorded every 15 minutes throughout the year. All sample counts for sediment, nitrogen and phosphorus monitoring are dependent on frequency and magnitude of rainfall events. Water samples are collected during lower streamflows on a weekly basis unless streamflow is not sufficient or the stream is ice-covered. Two water sample bottles are taken at each sampling interval. One bottle is portioned out into smaller bottles for preparation and delivery to the ISWS Analytical Laboratory for nitrate-nitrogen (NO_3-N), ammonium-nitrogen (NH_4-N), total Kjedahl nitrogen (TKN), total phosphorus (TP), total dissolved phosphorus (TDP), and orthophosphate (P-ortho) concentration analysis. The other bottle is delivered to the ISWS-ISGS Sediment Materials Laboratory for suspended sediment concentration (SSC) analyses.

During Water Year 2020, the IRB stations collected between 52 and 75 samples each for nitrate-N and orthophosphate-P and between 17 and 31 samples each for ammonium-nitrogen, total Kjedahl nitrogen, total phosphorus, and total dissolved phosphorus. Suspended sediment sample count ranged between 70 and 120. Total number of nutrient and sediment concentration analyses performed for IRB stations were 1142 and 463, respectively. The KRW stations collected between 24 and 102 samples each for nitrate-N, orthophosphate-P, ammonium-nitrogen, total Kjedahl nitrogen, total phosphorus, and total dissolved phosphorus. Suspended sediment sample count ranged between 57 and 136. KRW stations had 1134 and 366 analyses performed for nutrient and sediment concentrations, respectively. Based on mean station concentrations of nutrients and sediment, IRB stations tend to have higher concentrations than KRW for nitrate-N and suspended sediment, whereas total dissolved phosphorus and orthophosphate-P are higher for KRW.
Loading of nutrients and sediment are computed using the continuous streamflow data and concentration values. This information is available in the annual progress report. However, to compare the different watersheds in terms of the amount of sediment and nutrient generated per unit area from each of the watersheds, the annual yields were also computed for sediment and nutrients by dividing the total annual load by the drainage area in acres above each of the monitoring stations. Evaluating changes using annual yields (load per unit area) will better inform what land management activities in each watershed were most effective on reducing loads. Sediment and nutrient yields for WY2020 in the IRB and KRW CREP monitoring watersheds were lower than that of WY2019 due to dryer conditions in WY2020.

The data generated by the monitoring programs in the IRB and KRW are being used as input for several data analyses, trends and modeling efforts that provides tools to not only determine load reductions but also understanding effectiveness of BMPs on watershed scales as well as future scenario testing to determine long-term load reductions for the Illinois Conservation Reserve Enhancement Program.

Water Quality Data Modeling: The main objectives of the CREP water quality data modeling are conducting exploratory data analysis (EDA) and estimation of trends. The USGS's WRTDS (Weighted Regression on Time, Discharge and Season) method was mainly employed to develop data-driven model models using hydrologic and water quality (sediment and nutrient) monitoring data from CREP headwater monitoring watersheds in Illinois River Basin (IRB) and Kaskaskia River watershed (KRW). Since the CREP monitored watersheds in KRW currently have less than ten years of data, the SKT (Seasonal Kendall Test) method, which is a nonparametric test, was also used for estimating monotonic trends. In this past year, the EDA analysis was updated to water year 2020 for all water quality parameters monitored at IRB and KRW CREP stations. Tableau dashboards that incorporate EDA plots were prepared for all monitoring stations and water quality parameters. The WRTDS models for five of the CREP monitoring stations in IRB, namely Court Creek, North Creek, Haw Creek, Panther Creek and Cox Creek were updated to water year 2020, which is an additional four more years of data since 2016. WRTDS models were also setup for each of the water quality parameters monitored in KRW CREP stations but the models require at least 10 years of data for estimating trends. However, they can be used to compute historical concentration and loads at different time steps.

SWAT CREP Watershed Models: The goal of developing hydrologic watershed models for the CREP headwater monitoring watersheds using SWAT is to identify high sediment and nutrient yield areas within the watershed for prioritization of BMP implementation and to evaluate the effect of different BMPs included in CREP practices within the monitored watersheds. Impact of climate change on sediment and nutrient yields, and on the effectiveness of BMPs, can be estimated using these watershed models. In this past year, watershed models were developed for the four monitored CREP KRW watersheds and the entire Kaskaskia River Watershed. All watershed models were calibrated and validated for their respective streamflows. Processing of the land use management for each CREP watershed (i.e., generation of crop rotations and field operations) were completed and water quality calibration is underway.

STEPL Watershed Modeling: The goal of the STEPL watershed modeling is to track annual sediment and nutrient load reductions in IRB and KRW. In this past year, STEPL, which is spreadsheet-based model, was tested on one of the CREP headwater monitoring watersheds. To facilitate STEPL watershed simulations for multiple years, computer codes are being developed using Python for preparing input data and simulating load reductions resulting from annual CREP acres. The CREP acres for each of the monitored CREP watershed in IRB and KRW were computed based on the federal and state CREP enrollment information obtained from IDNR. Ratio of CREP acres to CREP watersheds were also computed as inputs to the STEPL model. Computer codes used to process the CREP acres by conservation practice will later be used for generating CREP acres for any HUC12, HUC8 and major watersheds in IRB and KRW, as well as area ratios to their respective watershed areas. Other input data for STEPL are being generated by the data collected in the watersheds rather than default values available in the model. This will improve the load numbers generated by the model year by year.

ILLINOIS CREP PARTNER UPDATES

Association of Illinois Soil and Water Districts

The Association of Illinois Soil and Water Conservation Districts (AISWCD) and the local Soil and Water Conservation Districts located in the Illinois River and Kaskaskia River Watersheds continued to support the Illinois Department of Natural Resources in its effort to reintroduce the Conservation Reserve Enhancement Program (CREP). Landowners are particularly excited about the reopening of the CREP Program. CREP adds another dimension to existing programs intended to battle the current and anticipated impacts of climate change. Landowners adding CREP to their conservation portfolio gives them the edge to adopt/use best practices that will be compatible with climate change. Soil and Water Conservation Districts (SWCDs) are in a unique position to assist landowners and IDNR /other partners with CREP implementation. The AISWCD believes that the new CREP will help rachet up the State of Illinois' overall efforts to protect and enhance its irreplaceable natural resources.

Illinois Department of Agriculture

Illinois Department of Agriculture (IDOA) administers numerous soil and water conservation programs that produce environmental benefits in the Illinois River Watershed. In FY20, the Partners for Conservation Fund Program (PFC) Agricultural Components, administered by IDOA, has allocated over $1,219,592 to 34 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 75% of the cost of constructing conservation practices that reduce soil erosion and protect water quality. 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 in total of $1,384,536. 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 $100,000 has been allocated to stabilize and protect adjacent water bodies.

Illinois Environmental Protection Agency

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 337 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 Green Infrastructure Grant Opportunities Program (GIGO): Illinois EPA began implementation of the GIGO program in 2021. A total of 11 projects were selected for funding. Grants are available to local units of government

and other organizations to implement green infrastructure best management practices (BMPs) to control stormwater runoff to reduce localized and riverine flooding for water quality protection in Illinois.
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 662 TMDLs for 679 causes of impairment. Illinois EPA continues to develop TMDLs on impaired waterbodies.

Illinois Nutrient Loss Reduction Strategy:
The Illinois Nutrient Loss Reduction Strategy (NLRS) was released in 2015 by Illinois EPA, Illinois Department of Agriculture, and University of Illinois to address excess nutrient loadings to Illinois waterways and contribution to the Gulf of Mexico hypoxic zone. The NLRS set an interim goal of reducing nitrate loads by 15% and total phosphorus loads by 25% by 2025, and a long-term goal of reducing both nutrients by 45%. A Policy Working Group and nine subgroups guide state agencies in implementing the recommendations of the NLRS in the agriculture, point source, and urban stormwater sectors The NLRS established eleven priority watersheds, five of which are in the Illinois River Basin. A Biennial Report is released every two years to document the progress of implementation. For more information, visit http://go.illinois.edu/NLRS.

Current Management Approaches and Issues:
Illinois EPA will continue implementation of the above programs and investigation of new programs and projects to help support the mission of CREP.
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.

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.

Illinois Department of Natural Resources

Natural Resources Damage Assessment

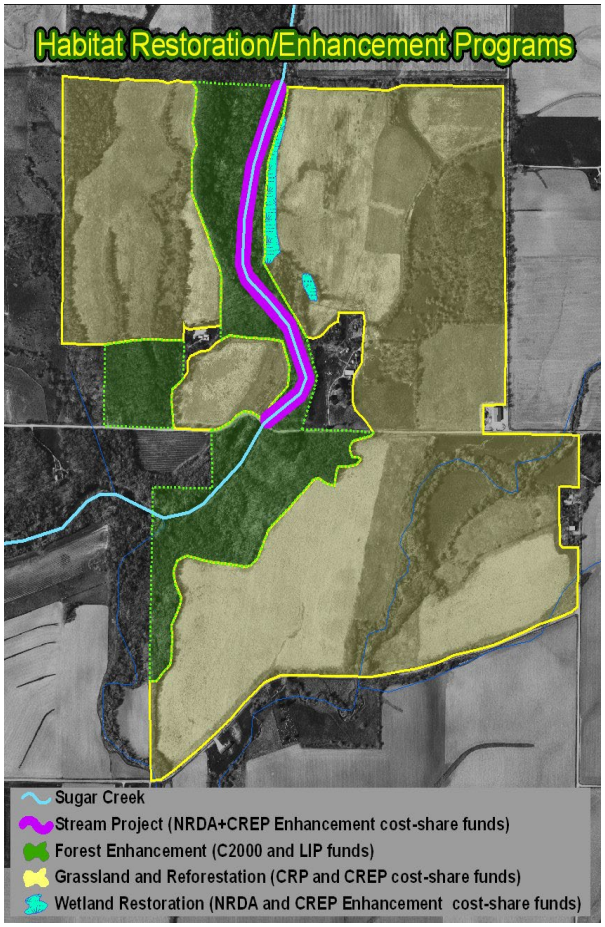
Preserve - Williams Pipeline
Williams Pipeline Company (Williams) owns and operated transmission pipelines that carry refined petroleum products through rural areas of Logan County. Sometime in early 1997, Williams had a leak of 10,000 gallons of gasoline and diesel oil located two miles south of Broadwell, 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 is ongoing. A comprehensive report summarizing the monitoring activities and results will be made available in the future.

For additional information on the Natural Resource Damage Assessment and Restoration efforts, visit https://www2.illinois.gov/dnr/programs/NRDA/Pages/WilliamsPipeline.aspx.

CREP Habitat Enhancement Project - Bellrose

This pilot enhancement program provided cost-share and technical assistance to maintain or improve the wildlife habitat on permanent State CREP Easements. As suggested in the 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.

In 2019, IDNR secured a contract with the U of I, Department of Natural Resources and Environmental Sciences, to monitor the plants and invertebrates of the Bellrose wetland. Results from the 2019 wetland monitoring indicate plant diversity across four transects has increased since 2010. The Floristic Quality Index (FQI) increased modestly in two transects but decreased in two transects. The FQI decreases are related to the invasion of Phragmites australis and Phalaris arundinacea. Recommendations to control these plant species will be pursued.

Results from the 2019 monitoring effort also indicate a general increase in species richness of invertebrates compared to past monitoring efforts. Invertebrates are an essential component of wetland communities and future surveys to document the trajectory of invertebrates utilizing the Bellrose wetland throughout time will be monitored.

In early November of 2020, members of the Jake Wolf Memorial Hatchery and Contaminant Assessment Section set out at Bellrose Nature Preserve to release propagated mussels in Sugar Creek. Plain Pocketbook mussels were propagated at the Hatchery and were placed in areas of the stream that provided the most suitable substrate. The mussels were marked prior to release with glitter glue to be tracked and monitored in the future.
https://www.facebook.com/JakeWolfHatchery/posts/209917343869419

A wetland monitoring report is available online at https://www2.illinois.gov/dnr/programs/NRDA/Documents/Sandra_Miller_Bellrose_Wetland_Monitoring_Report.pdf

A host of monitoring efforts have occurred from 2006-2019. A comprehensive report summarizing the monitoring activities and results will be made available in the future.

Illinois Recreational Access Program

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
- Youth Shotgun Deer 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 four separate grants from the US Department of Agriculture ‘s Voluntary Public Access and Habitat Incentive Program, the IDNR pays an annual lease payments to landowners enrolling their property into IRAP. In addition, IRAP leverages state funds and assists enrolled landowners with implementation of habitat management projects on their land. 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 about half of all IRAP leased 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 26,400 acres in 52 counties.
- Provided thousands of hunting and fishing opportunities for youth and adults.
- Created more than 80 habitat management plans for IRAP leased properties.
- Habitat Management implementation on more than 16,600 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.

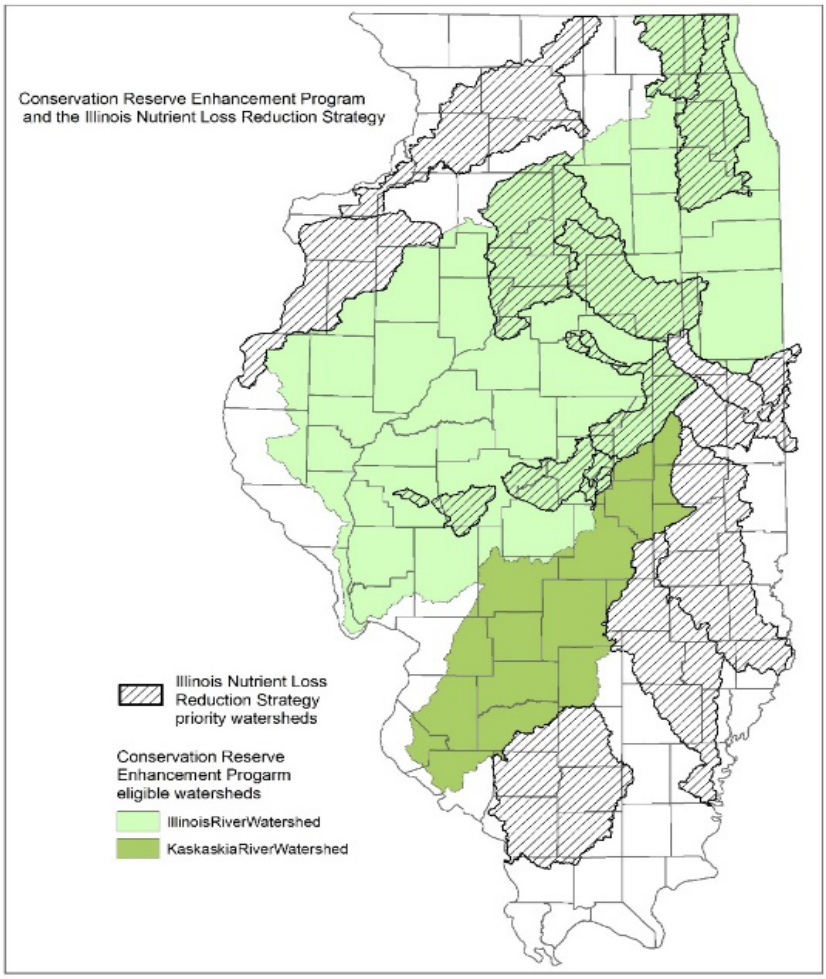
Illinois Nutrient Loss Reduction Strategy

Illinois consists of more than 22 million acres of corn and soybeans (60 percent of the state's land area). The Agricultural goal of the Illinois Nutrient Loss Reduction Strategy (NLRS) for farmers is 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 toward nutrient loss, based on available research. The specific suite of practices appropriate for any given field will depend on many factors including soil characteristics, landscape position/hydrology, and current cropping and management practices.

The NLRS has identified measures that would address nutrient reductions (see list below). Of those, several can be accomplished through CREP:

- reduce N rate from background
- nitrification inhibitor with fall fertilizer
- two split applications of fall and spring
- one spring-only application
- three split applications
- cover crops on tile drained
- cover crops on non-tile
- bioreactors
- **wetlands**
- **buffers on crop land**
- **perennial/energy/hay crops**
- perennial/energy tile drained

For more information, the full NLRS strategy can be found here: https://www2.illinois.gov/epa/topics/water-quality/watershed-management/excess-nutrients/Pages/nutrient-loss-reduction-strategy.aspx



NLRS Priority Watersheds and CREP eligible watersheds

CREP is driven by locally led conservation efforts and employs a variety of Best Management Practices to protect and restore riparian corridors. The table below shows CREP practices that were identified by the NLRS science assessment as measures to be tracked. The acres listed are only for easements where the Federal CREP contract has expired, and they are solely on the State side of the CREP program so as not to double report with the federal CRP program.

	BMP	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
CP 9 CP23	Wetland Acres	21	651	3,681	11,976	17,406	19,467	19,523	19,523	19,523	19,528	19,760
CP21 CP22	Buffer Acres	526	1,324	2,720	5,467	8,768	13,568	13,764	13,850	13,855	13,883	15,467
CP2 CP4D	Perennial/Energy Acres	0	7	84	1,622	2,107	4,395	4,670	4,718	4,726	4,726	5,666
	Total Cumulative NLRS Acres	**547**	**1,982**	**6,485**	**19,065**	**28,281**	**37,430**	**37,957**	**38,091**	**38,104**	**38,137**	**40,893**

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 contributions at this time by the NLRS Science Assessment, but perhaps could be in the future. This table lists all CREP practices and acreages associated with CREP from the start of the program until end of 2021. 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.*

	NLRS CP 9 CP23	NLRS CP21 CP22	NLRS CP2 CP4D	Non NLRS crop acres CP11 CP12 CP3 CP3A	Non NLRS Additional Acres
	Wetland acres	Buffer acres	Perennial acres	Other acres	ADD acres
1999	0	0	0	9	5,031
2000	0	0	0	0	7,134
2001	0	17	0	0	7,892
2002	0	6	0	0	3,967
2003	0	0	0	0	303
2004	0	18	0	0	2,412
2006	0	0	0	0	201
2007	11	20	0	6	2,728
2008	0	46	0	0	2,382
2009	0	12	0	0	0
2010	0	83	0	0	0
2011	10	324	0	7	1,437
2012	630	799	7	9	2,821
2013	3,030	1,395	77	126	1,133
2014	8,296	2,747	1,539	978	1,084
2015	5,430	3,301	485	563	220
2016	2,061	4,800	2,288	1,718	51
2017	56	196	274	29	179
2018	0	86	49	7	107
2019	0	5	8	0	66
2020	5	28	0	17	218
2021	233	1,584	940	732	36
	19,760	15,467	5,666	4,199	39,402
	Total	**Total**	**Total**	**Total**	**Total**

Great Rivers Research and Education Center

Providing boots-on-the-ground, the National Great Rivers Research and Education Center's (NGRREC) Land Conservation Specialist (LCS) program works in partnership with soil and water conservation districts (SWCD) and the Illinois Department of Natural Resources (IDNR), and the Natural Resources Conservation Service (NRCS). Land Conservation Specialists (LCS) are dedicated to providing outreach to private landowners involving the implementation and administration supporting of best management practices to promote watershed health and wildlife habitat, which includes CREP watersheds. As CREP reopens NGRREC looks forward to continued conversations on how the LCS program can support CREP to improve watershed health and provide wildlife habitat to Illinois' species of greatest conservation need.

Natural Resources Conservation Service

Conservation Accomplishments in the Illinois River Watershed

The Natural Resource Conservation Service (NRCS) works closely with the Farm Service Agency and the Illinois Department of Natural Resources to provide technical assistance for the federal side of CREP. NRCS develops conservation plans with the landowners, that enter into the federal side of CREP, to establish and maintain proper conservation cover on their CREP acres. NRCS also provides technical assistance for the Conservation Reserve Program (CRP), developing conservation plans with landowners and operators. Additionally NRCS provides conservation

planning and financial assistance to landowners and operators through a number of conservation programs. Through the conservation title of the 2018 Farm Bill, NRCS provides financial and technical assistance for implementing conservation practices through the Environmental Quality Incentives Program (EQIP), the Conservation Stewardship Program (CSP) and the Regional Conservation Partnership Program (RCPP); and secures easements to protect agricultural lands and wetlands through the Agricultural Conservation Easement Program (ACEP). NRCS also provides easement opportunities to landowners for the purchase of floodplain easements through the Emergency Watershed Protection Program (EWPP-FPE). NRCS' conservation planning work also ties in well with the Illinois EPA's Nutrient loss reduction strategy, by helping landowners and operators reduce erosion, improve water quality and wildlife habitat.

Through program support and general conservation assistance, landowners and operators install and adopt a wide array of voluntary conservation practices such as cover crops, bioreactors, saturated buffers, waterways, filter strips, pollinator habitat, and many other practices through NRCS' programs. The implementation of these practices on private lands, with assistance from NRCS, results in; increased soil health, reduced soil erosion, improved water quality, enhanced wildlife habitat and most importantly an improved environment for the NRCS clients and the general public in the Illinois River Watershed. Here is a summary of the assistance NRCS provided in FY 21 through their financial assistance programs:

Environmental Quality Incentives Program (EQIP) - $17.7 million
Conservation Stewardship Program (CSP) - $20.6 million
Regional Conservation Partnership Program (RCPP) - $3.9 million
Agricultural Conservation Easement Program-Wetland Reserve Easements (ACEP-WRE) - $10.3 million
Agricultural Conservation Easement Program-Agriculture land Easements (ACEP-ALE) - $566,000
Emergency Watershed Protection Program (EWPP-FPE) - $9.1 million

The Nature Conservancy

The Nature Conservancy (TNC) is highly supportive of the Illinois CREP as a powerful way to leverage state and federal resources to partner with farmers to improve water quality, restore wildlife habitat, and improve resiliency. TNC applauds Illinois Department of Natural Resources' efforts in successfully negotiating with U.S. Department of Agriculture's Farm Service Agency to amend the IL CREP agreement and to resume enrollment in the Illinois River and Kaskaskia River watersheds next year. TNC continues to work cooperatively with other non-profits and agricultural organizations in support of the Illinois CREP. In anticipation of the program's re-opening, TNC has been advancing the science, demonstration and training to implement wetland restoration.

With McLean County Soil and Water Conservation District, Natural Resources Conservation Service, Farm Service Agency, the University of Illinois, and the City of Bloomington, TNC has worked with landowners and producers in McLean County to construct more than 20 wetlands that reduce nutrient loss from farm fields. Analyses over 12 years show that the wetlands constructed at the Research and Demonstration Farm in Lexington, Illinois, are very effective at reducing both nitrate-nitrogen and dissolved phosphorus.

In early 2021, The Nature Conservancy, the Soil and Water Conservation Society, and Meridian Institute released *Leading at the Edge: A Roadmap to Advance Edge of Field Practices in Agriculture,* a new resource to build awareness, generate momentum, and catalyze adoption of conservation practices such as wetlands, buffers, and filter strips that provide nutrient retention and removal, along with valuable biodiversity and ecosystem service benefits. The Edge of Field (EoF) Roadmap, which was collaboratively developed with engagement from 26 agricultural and environmental leaders from across the U.S., advances a set of nine action-oriented recommendations and calls for conservation groups, policy makers, farmers, farm organizations, supply chain companies and other agricultural stakeholders to work collaboratively for a robust and sustainable food system. EoF Roadmap is available at www.nature.org/EdgeOfField.

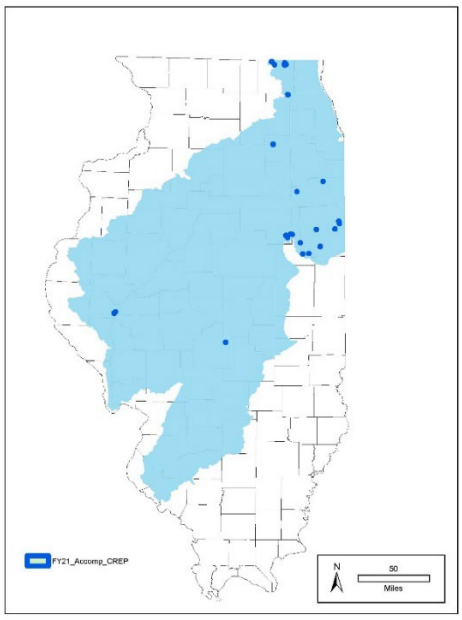
And finally, the Agricultural Conservation Planning Framework (ACPF) is a valuable collection of data and ArcGIS tools used to identify suitable potential locations for conservation practices such as wetlands in small (HUC-12) agricultural watersheds. In Fall 2021, several Illinois practitioners participated in a regional training focused on using ACPF outputs in conservation planning and outreach, and they established an IL ACPF working group, hosted by the IL Sustainable Ag

Partnership with leadership from TNC and The Wetlands Initiative. This cohort will continue to meet in 2022 to better understand the current landscape of ACPF use in Illinois, to share ideas and best practices, and to coordinate efforts to scale up ACPF application in ways that support conservation outreach efforts and increase implementation of wetlands, buffers, and other long-term conservation practices.

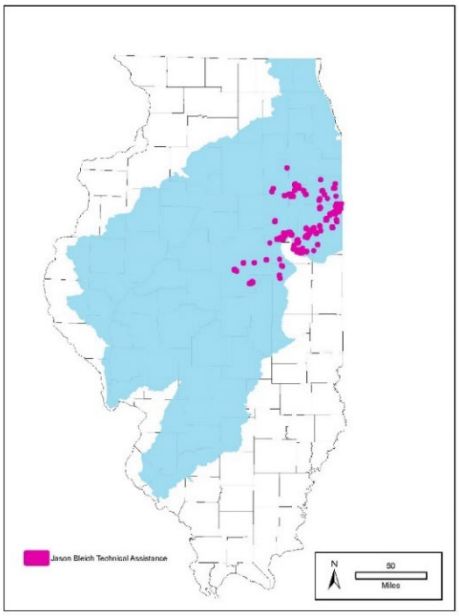
US Fish and Wildlife Service

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 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 federal fiscal year 2021, the PFW program conserved 107.6 acres of wetlands and 269.5 acres of upland habitat within the CREP area. In addition to the habitat conservation, our staff provided technical assistance to over 100 landowners, with an average field size of 88 acres. In total, the PFW staff provided technical assistance on over 8,700 acres of land within the CREP watershed.



A new Private Lands Biologist, Emily Hodapp, was added to our team in July of 2021. Emily will be based out of the Springfield DNR building when COVID allows and provide another resource for the Illinois River watershed. Mike Budd, State Coordinator for the IL Partners for Fish and Wildlife Program, is moving to Minnesota in mid-February for a new position.

Project monitoring has documented 3 state endangered species at some of our projects within the CREP watershed. Those species are the king rail, yellow-crowned night heron and black tern. We continue to work on projects along the Illinois river that we hope will lead to a delisting of the decurrent false aster, a federally threatened plant species. Additionally, water quality sampling at a few of our wetland projects showed that the wetlands were reducing nitrate runoff by more than 50% at some sites.

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