

# Illinois Conservation Reserve Enhancement Program



Building a Foundation for River  
Watershed Restoration and  
Management

# Background

- 1994 Lt. Governor's office convened a group of over 140 stakeholders;
- 1997 Integrated Management Plan of the Illinois River Watershed and Law passed establishing the Illinois River Coordinating Council (IRCC);

# Major Threats to the Illinois River

- Sedimentation
- Loss of critical aquatic habitats
- Loss of wetlands
- Altered hydrological regime
- Impaired water quality due to sedimentation and high nutrient loads



# Restoration of Illinois River Basin: Illinois Rivers 2020

Farm Bill Programs- US Department of Agriculture and the State of Illinois

CREP (Conservation Reserve Enhancement Program) – Most successful in the United States



## Illinois River Basin Restoration

US Army Corps of Engineers and the State of Illinois

## Clean Water Initiatives

US Environmental Protection Agency and the State of Illinois

# Illinois Conservation Reserve Enhancement Program (CREP)



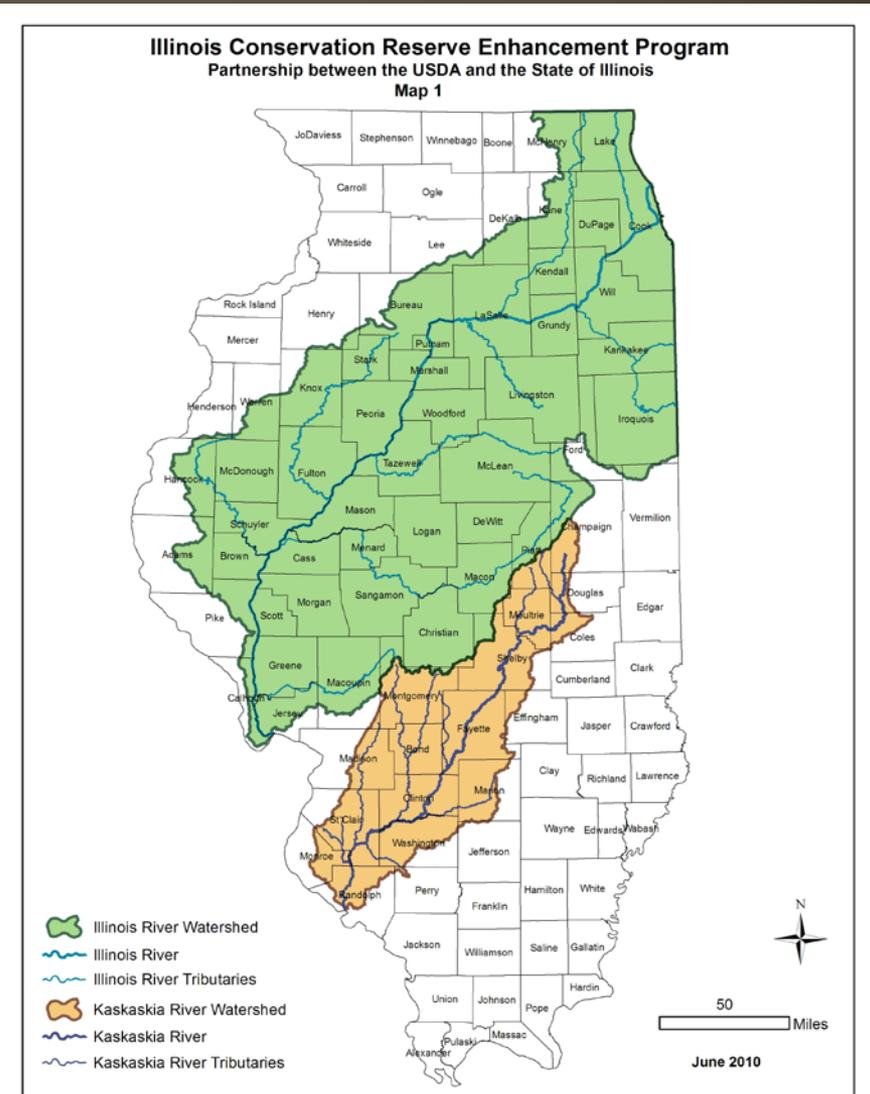
- Federal, State, and Local Partnership
- Restores floodplains, erodible acreage adjacent to the floodplain, and farmed wetlands



- Illinois CREP began on May 1, 1998
- 1999 LaMoine Watershed Added to Eligible Area
- 2000 Sangamon River Watershed and rest of Basin
- 2001 Additional 32,000 acres – Total 132,000 acres
- November 2001, Illinois CREP closed
- December 2002, new Farm Bill, new MOA and another 100,000 acres – Total 232,000 acres
- May, 2004 – Special State Enrollment for 2001 waiting list
- December 2006 – Lottery for new enrollments
- November 2007 – Enrollment Closed
- 2010 Capital Bill - \$45 Million for CREP
- December 1, 2010 – CREP re-opens and expands to Kaskaskia

# New Eligible CREP Area

- CREP started in the Illinois River Basin on May 1, 1998
- Enrollment closed November 2007 due to lack of State funds
- The FY 2010 State Capital Budget provided \$45 Million to re-open enrollments and expand to the Kaskaskia
- Available in 68 counties
- Enrollment began on December 1, 2010 with 105,850 acres available



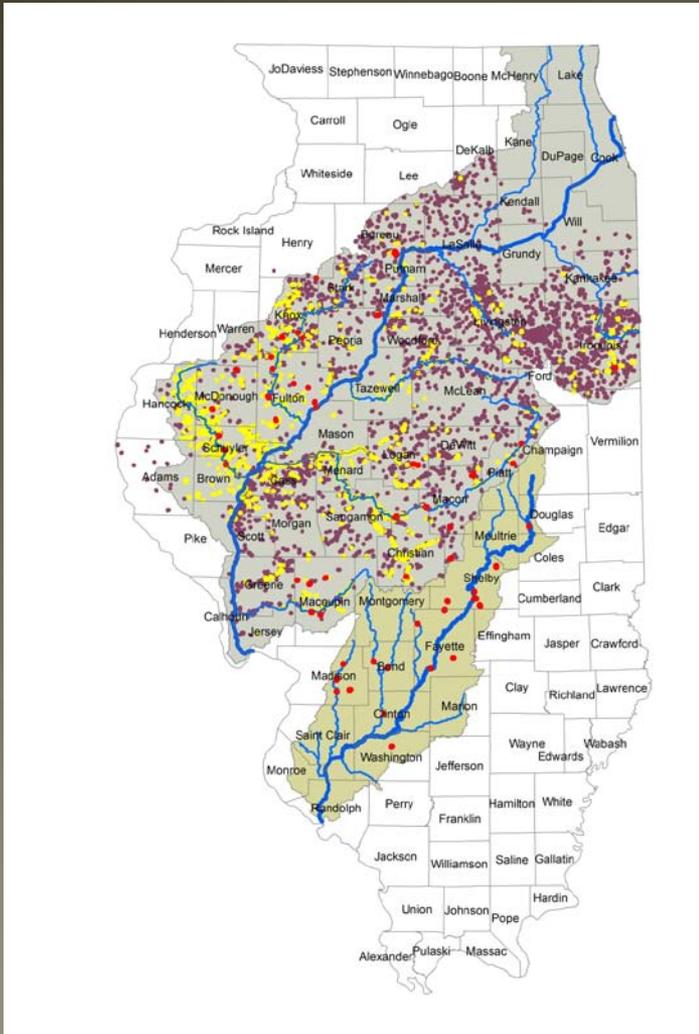
## CREP ENROLLMENTS 1998-2009

- Federal – 125,600 acres
- State Easements – 82,400 acres

## CREP ENROLLMENTS

12/1/2010 through 9/15/2011

- Federal – 811 contracts offering 17,293 acres
- State Easement offers – 67 offering 5,203 acres



-  New State CREP offer
-  Existing State CREP
-  Existing Federal CREP
-  Illinois River Watershed
-  Kaskaskia River Watershed

# Top States in CREP Acres Enrolled (9/30/11)

- PENNSYLVANIA – 205,921 acres
- ILLINOIS – 129,824 acres (more pending)
- OHIO – 110,016 acres
- KENTUCKY – 100,798 acres
- MINNESOTA – 89,978 acres
- MARYLAND – 70,626 acres
- NEBRASKA – 71,939 acres
- MICHIGAN – 71,162 acres

# Goals of CREP

- Reduce Sedimentation by 20%;
- Reduce Nutrients by 10%;
- Increase Populations of Waterfowl, Shorebirds, and Grassland Birds by 15%;
- Increase Native Fish and Mussel Stocks in the Lower Reaches by 10%; and
- Help reduce nitrogen loading to Mississippi River and Gulf of Mexico (Added in 2010 Amendment along with Addition of Kaskaskia River Watershed)

# Eligible Acres

- Targets Riparian Areas defined as the 100 Year Floodplain;
- Targets HEL Land with  $EI \geq 8$  and which is adjacent to the Floodplain;
- Targets Wetland Restorations throughout the Eligible Area;
- Focuses on Native Vegetation



# Enrollment Options

- 15 Year Federal CRP/CREP Contract (Federal contract)
- Federal contract + 15 Year State Easement;
- Federal contract + 35 Year State Easement;
- Federal contract + Permanent State Conservation Easement



# Incentives

- 20% or 30% bonus above the Soil Rental Rate per year on the Federal Side;
- 50% Cost Share Reimbursement on Federal side;
- Signing Incentive Payment (SIP) and Practice Incentive Payment (PIP) for eligible practices;
- If entering into a state option, landowner receives a lump sum payment at the time of easement execution (amount varies with length of time for easement);
- State reimburses 40% of eligible costs for practices on 15 year and 35 year easements and 50% for permanent easements.

# State Conservation Easements

- SWCDs implement the State Side of CREP at the County level
- SWCDs hold the Conservation Easements
- Restricts agricultural use and development
- No permanent structures or roads may be built
- Landowner retains recreational rights – public access is not required, but can be allowed
- Timber production and harvest allowed with a Forest Management Plan
- Landowner retains rights to any future benefits from restoration activities

# CREP Accomplishments

- Created partnerships to accomplish conservation and management objectives;
- Created long corridors of essential habitat and river and stream protection;
- Made measureable progress towards CREP goals;
- Will continue to provide future environmental and economic benefits.



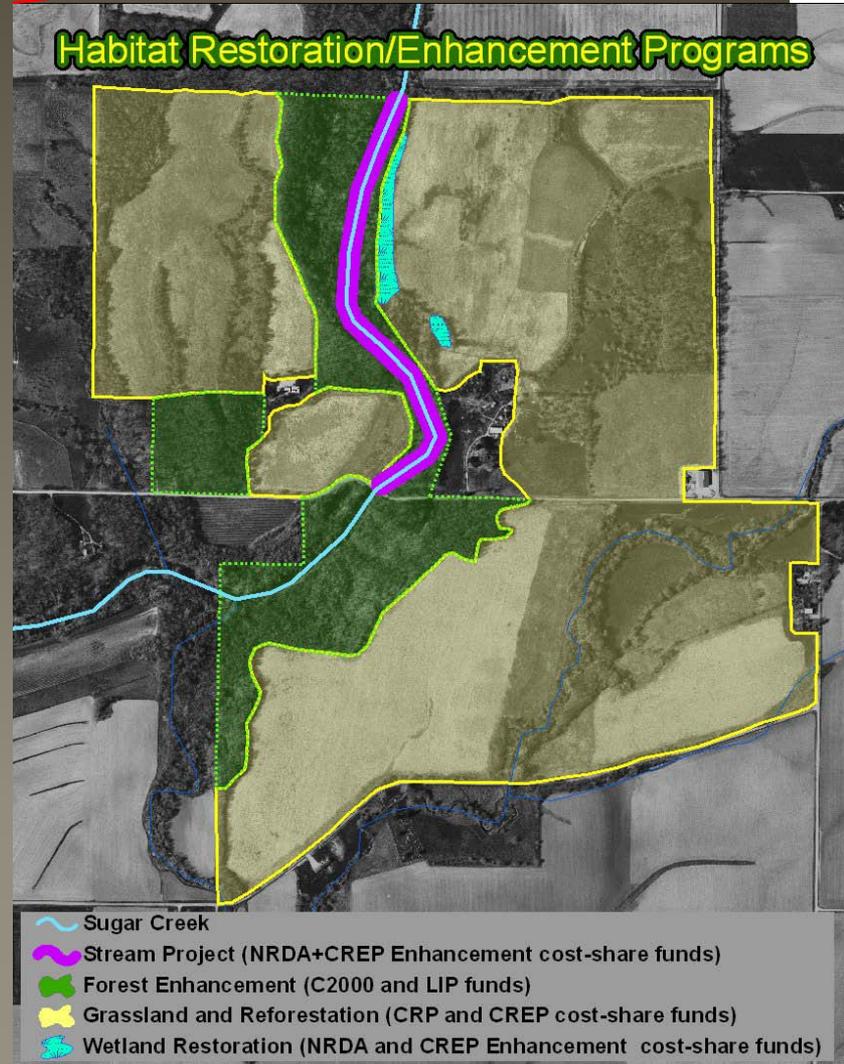
# Some CREP Partnerships

- CREP Advisory Committee;
- Partnership with Implementing Agencies;
- IEPA funded CREP Coordinators in Soil and Water Conservation District Offices;
- IEPA, IDNR, NRCS, Lewis & Clark University, and National Great Rivers Research and Education Center for Technical Assistance and Geo-Spatial Referencing;
- NGO's work in implementation.

# Bellrose Case Study

## Site Description

- Sandra Miller Bellrose Nature Preserve:
  - Location: Logan Co, Atlanta, IL
  - Features:
    - Approx. 106-acres
    - 0.8-mile segment of Sugar Creek: INAI for a high freshwater mussel diversity
    - Woodlands and fields



(Courtesy of IDNR Office Resource Conservation)

# Wetland Restoration Implementation – Bellrose



During restoration – site visit  
August 2007 (IDNR, Jessica Forrest)

Post restoration – site visit October 2007 (IDNR, Beth Whetsell)



Post restoration – site visit June 2008 (IDNR, Jessica Forrest)

# Instream Restoration



During restoration project implementation  
(Stone Toe Protection )- October 2007  
*(IDNR, Debbie Bruce)*



During restoration project implementation  
(Boulder Clusters)- October 2007  
*(IDNR, Adele Hodde)*



Post restoration (Stone Toe Protection) -  
Spring 2008 *(IDNR, Jessica Forrest)*



Post restoration (Longitudinal Habitat  
Structures) - October 2007 *(IDNR, Debbie Bruce)*

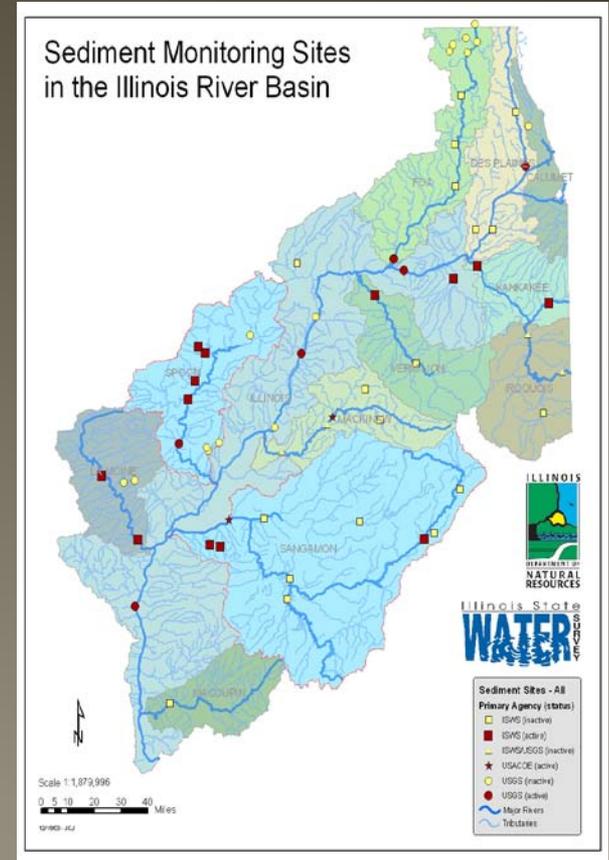
# Reducing Sediment and Nutrients

- It takes time to see the results of conservation practices and reduction of sediment and nutrient delivery;
- The Illinois State Water Survey is collecting data, has developed a process with modeling, and is evaluating the water quality improvements of CREP and other complimentary conservation efforts in the Illinois River Watershed.
- Recent data indicate that both the sediment and nutrient delivery to the Illinois River have either stabilized or decreased.

# 1980 - ISWS established the Illinois Benchmark Sediment Monitoring Network (BSMN) consisting of 50 monitoring stations throughout Illinois

Currently there are 15 active monitoring stations

- *Goal: Develop comprehensive, long-term database of suspended sediment transport to provide a means for investigating and quantifying long-term trends that may be occurring in Illinois watersheds.*



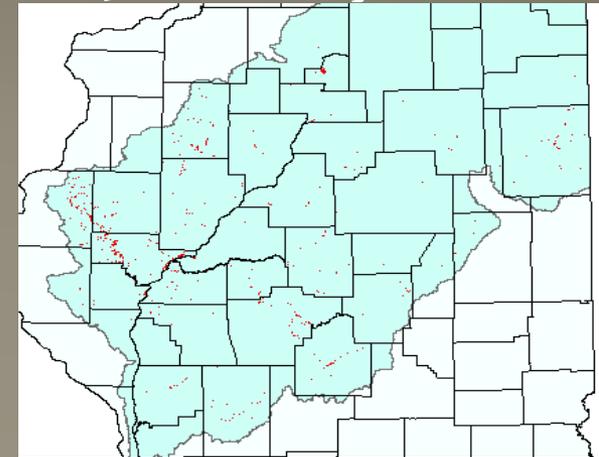
# TMDL Analysis

- Estimated the change in sedimentation in the Illinois River due to 9 CREP practices.
- Used the Revised Universal Soil Loss Equation (RUSLE)
  - $A=R*K*LS*C*P$
  - R = Rainfall factor, from NRCS
  - K = Soil erodibility factor, soils layer
  - LS = Slope length factor, soils layer
  - C = Management factor, from NRCS
  - P = Support practice factor, average

# Sedimentation Reduction From TMDL Analysis

- Amount of soil/sediment erosion prior to CREP enrollment was estimated at 103,163 tons/year.
- Amount of soil/sediment erosion after CREP restoration was estimated at 267 tons/year.
- Total reduction is an estimated 102,896 tons/year

**Found that 46,089 acres “save” 102,896 tons of soil each year**



# Increase populations of waterfowl, shorebirds, and grassland birds by 15 %

- CREP wetland restorations monitored for spring waterbird migration and breeding ;
- 75% wetlands used during migration;
- Sites with passive hydrological management had 400% greater use;
- Density of waterfowl broods 120% higher on passively managed sites.



Photo credit: Ben O'Neal

Greatest gains in use and reproduction through site-specific restoration related to hydrology and floristic structure.

# Increase Native Fish and Mussel Stocks in Lower Reaches by 10%

- Since 1951, DNR and INHS Long-Term River Basin Sport Fish Monitoring Program have annually sampled 27 sites in 6 navigational pools on the Illinois River.
- 98 fish species (seven hybrids) from 17 fish families have been collected on the main stem of the Illinois River.
- Prior to 1976, abundances of native fish were declining significantly, but that have increased significantly since then.

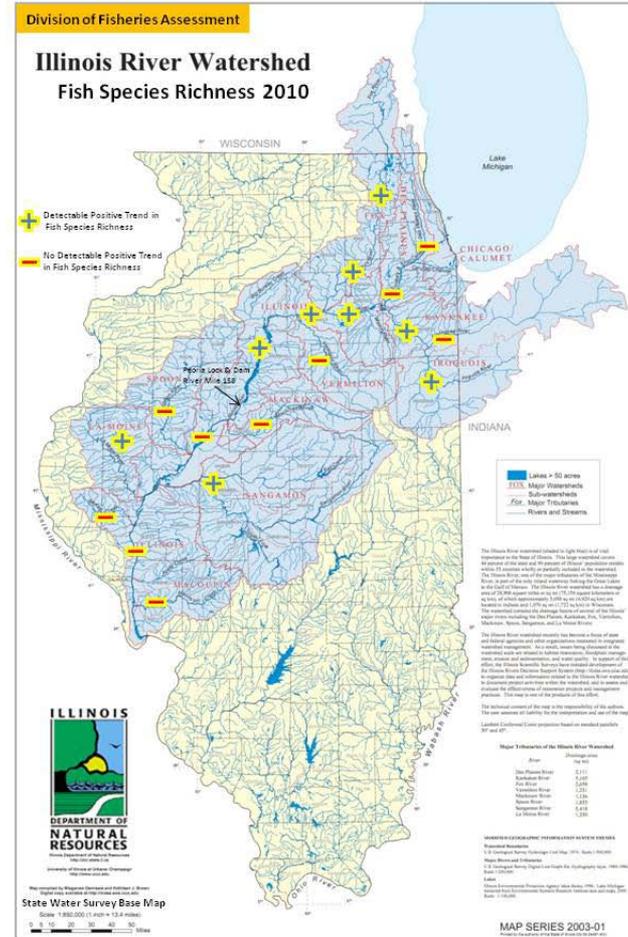
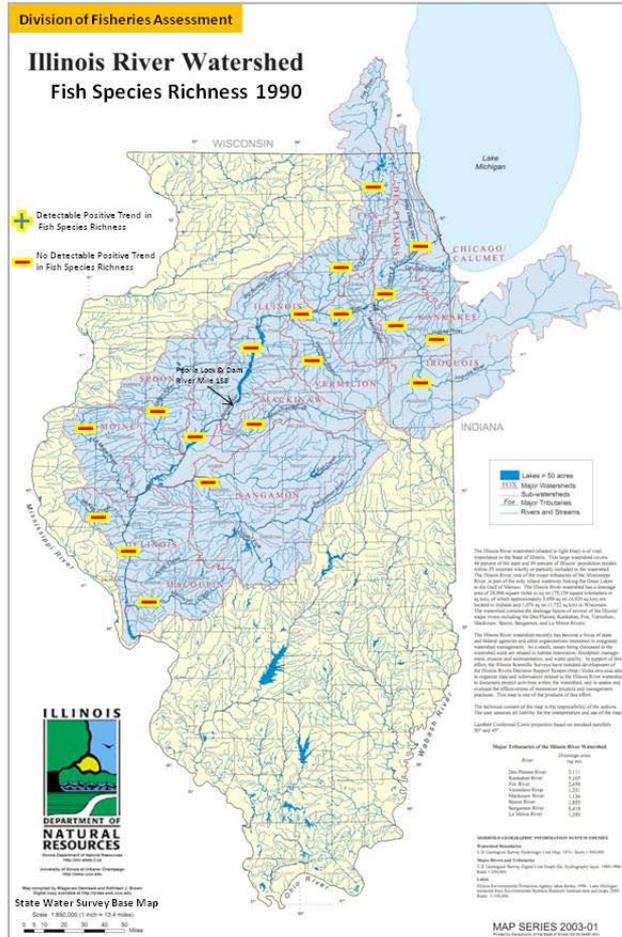


# Tributary Basin Surveys

- Since 1980, DNR Fisheries has been participating in IEPA Cooperative Basin Surveys.
- The 15 major watersheds are comprised of 305 hydrologic units, the majority of which have been sampled.
- There has been a measurable increase in native fish species richness .



# IEPA and DNR Cooperative Basin Surveys



## Adverse Impacts of Excessive Sediment

- Covering of Aquatic Vegetation
- Filling of Interstitial Spaces in Riffles
- Filling of Pools (loss of depth diversity)

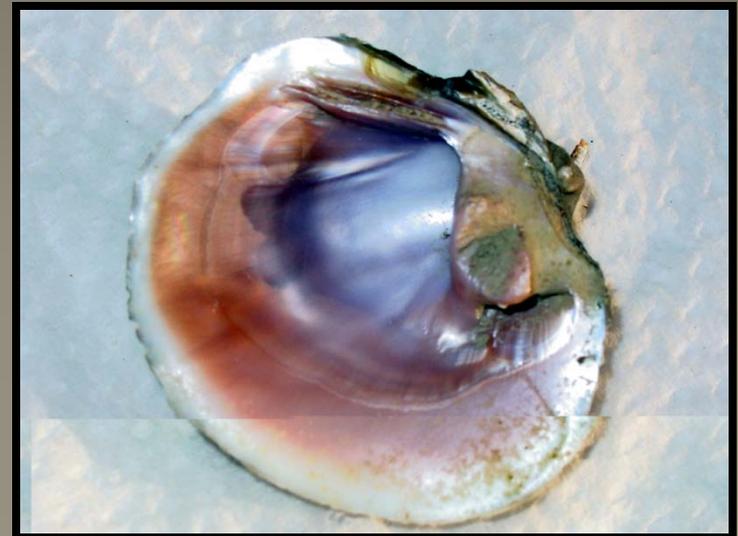


Illinois mussel species are generally declining from sediment deposition in rivers and streams.

Live Maple Leaf mussel from a relatively unimpacted riffle in the Kankakee River

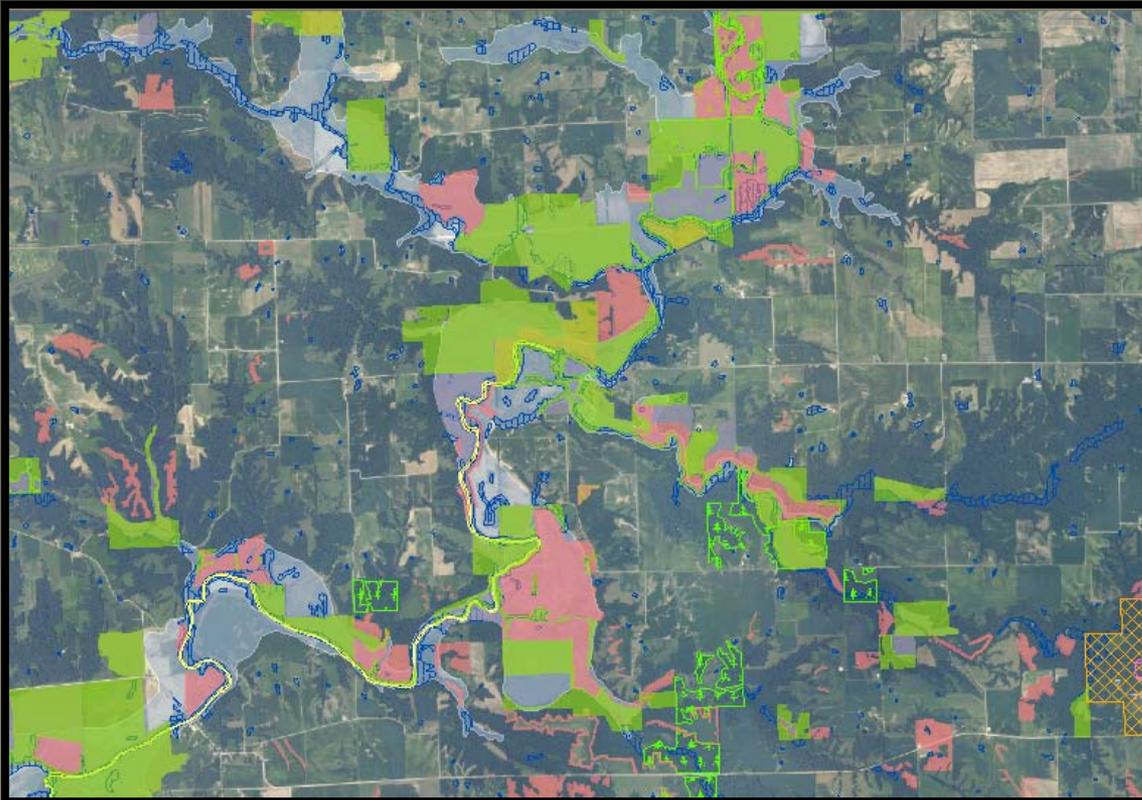
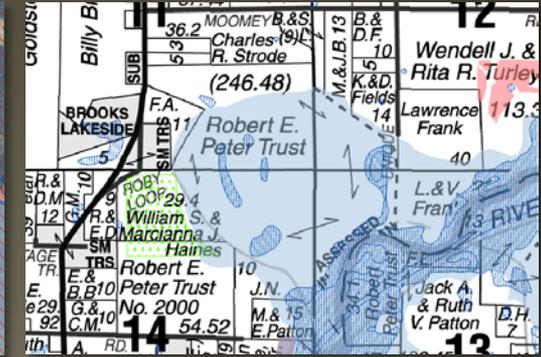
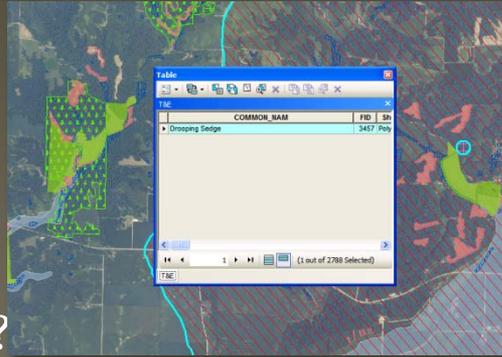


Preserved mussels: Monkey-face mussel and Purple Pimple Back mussel from the Kankakee River



# Targeting CREP

- Meets the requirements?
  - In/adjacent to floodplain?
  - Highly erodible land?
  - Farmed wetland?
  - Are there buildings?
  - Are there enough acres offered?



- What is the current condition of the land?
- Is the landowner making the best offer?
- Near to other conservation areas?
- Near to threatened/endangered species?

# Needs for CREP Opportunities

- Review of Program Goals and Direction along with the Illinois River Watershed Goals;
- Funding for Monitoring and Assessment;
- More collaboration with Partners for more effective enrollments;
- Funding for dedicated staff and technical assistance;
- Education and Marketing strategy;

# What are Future Priorities?

- Expands a corridor of CREP enrollments and other CRP;
- Along a listed impaired stream or a biologically significant stream and acres enrolled will improve water quality;
- Adjacent to an Illinois Natural Area Site;
- Adjacent to a protected site (State or Federal wildlife area, Nature Preserve, Forest Legacy Easement, etc.)
- Improves habitat for listed species; or
- Located in a Conservation Opportunity Area Wildlife Action Plan

# CREP will continue to provide Future Opportunities

- Will continue to build a foundation for future;
- Recreational and economic opportunities;
- Essential habitat;
- Water quality improvements;
- Corridors that may be critical for species in climate change;
- Continued National Recognition and opportunities to leverage National Programs for further Environmental and Economic Benefit