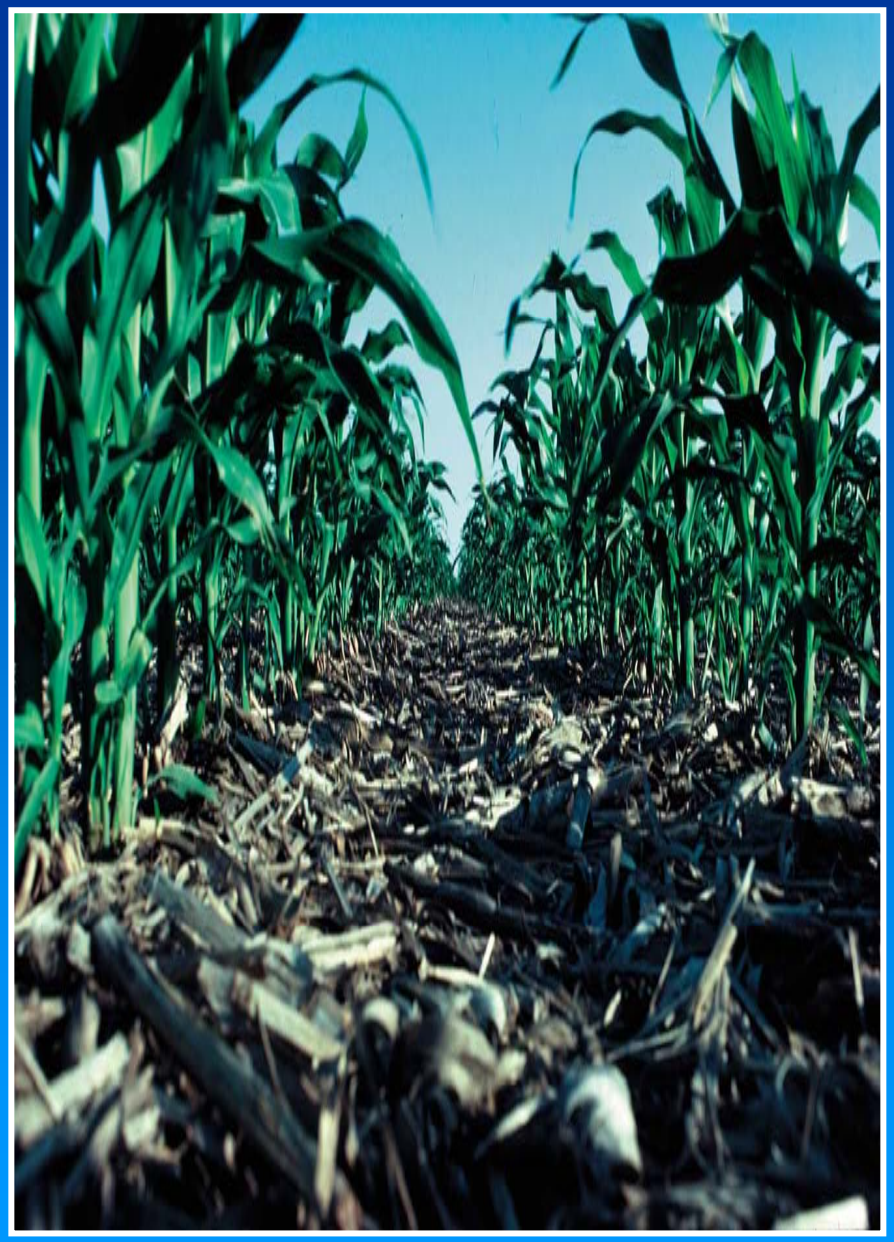
Many producers of commodity crops have adopted conservation practices as a part of their farming operations.

Specific on-farm and off-farm benefits of conservation practices and programs appear to be unknown.

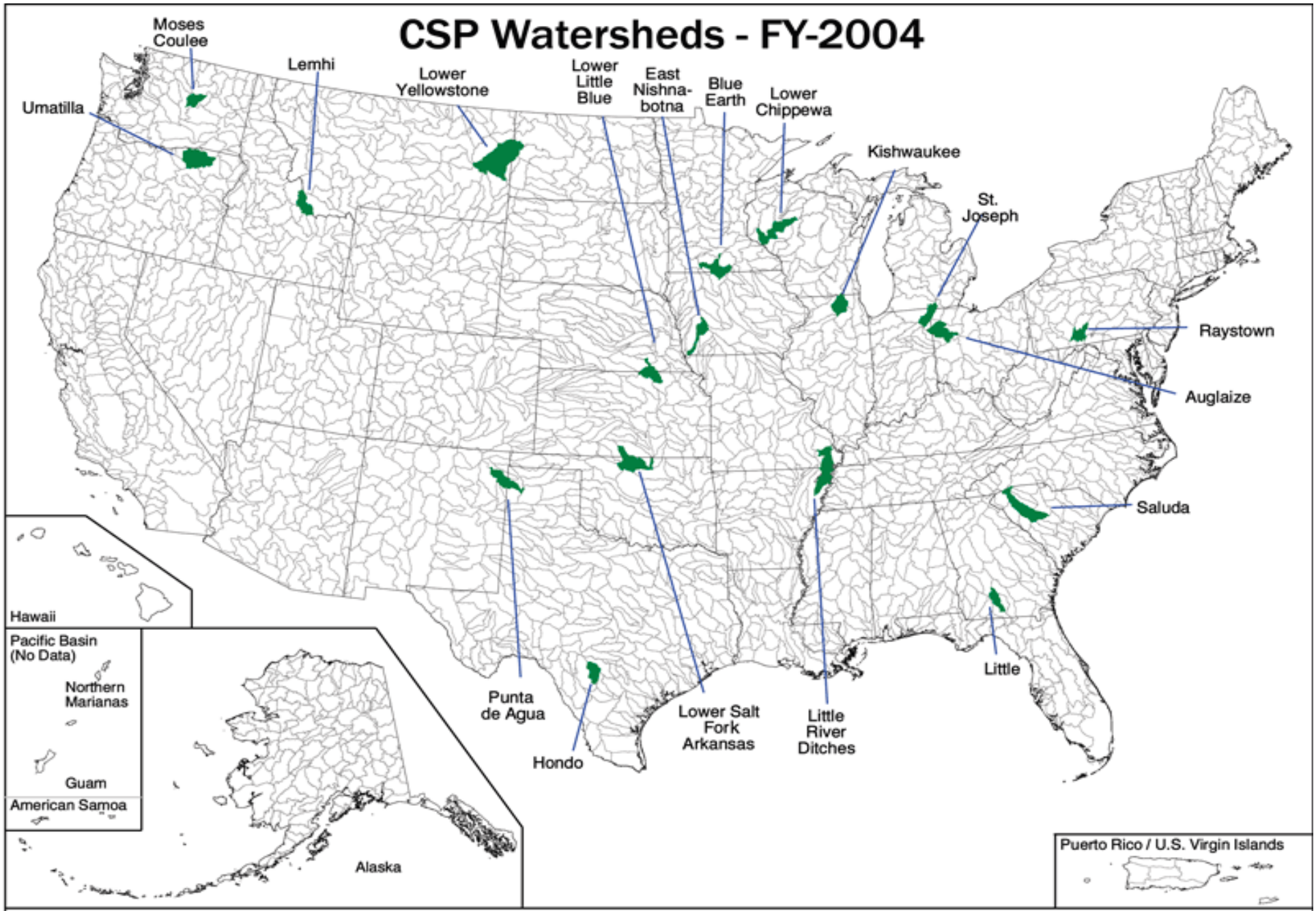
The effort farm operators put into conservation is poorly recognized by the American public.



How can the National Corn Growers Association communicate conservation efforts undertaken by their members?

What information, or data, are available describing environmental benefits brought by on-farm conservation actions and policies?

CSP Watersheds - FY-2004



U.S. Department of Agriculture
Natural Resources Conservation Service
Resource Assessment Division
Washington, D.C. May 2004

Map ID: m8093

Source: NRCS


Lower Little Blue River Watershed
An Overview of What We Know
About Assessment of Conservation
Policies

Information Sources for LLBR Analysis

Nebraska Fish and Game Commission

Nebraska Natural Resources Commission

Nebraska Association of Resource Districts

Nebraska Agricultural Statistics Service

Nebraska Corn Growers Association

Kansas State University

Kansas Department of Health and Environment

Kansas Department of Wildlife and Parks

Kansas Corn Growers Association

Kansas Alliance for Wetlands and Streams

The Watershed Institute

USDA Farm Service Agency, (FSA)

USDA Natural Resources Conservation Service, (NRCS)

USDA National Agricultural Statistics Service

U.S. Environmental Protection Agency

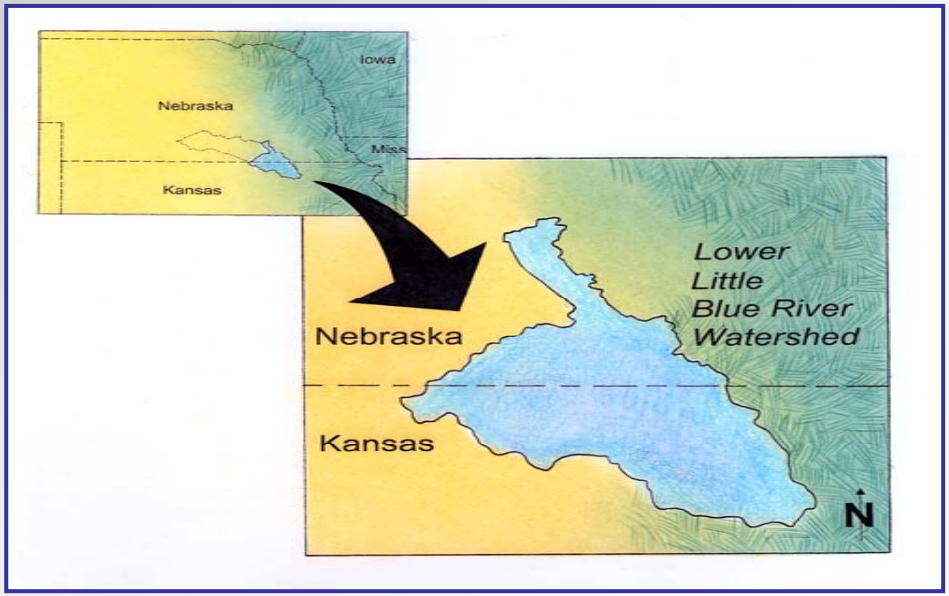
U.S. Fish and Wildlife Service

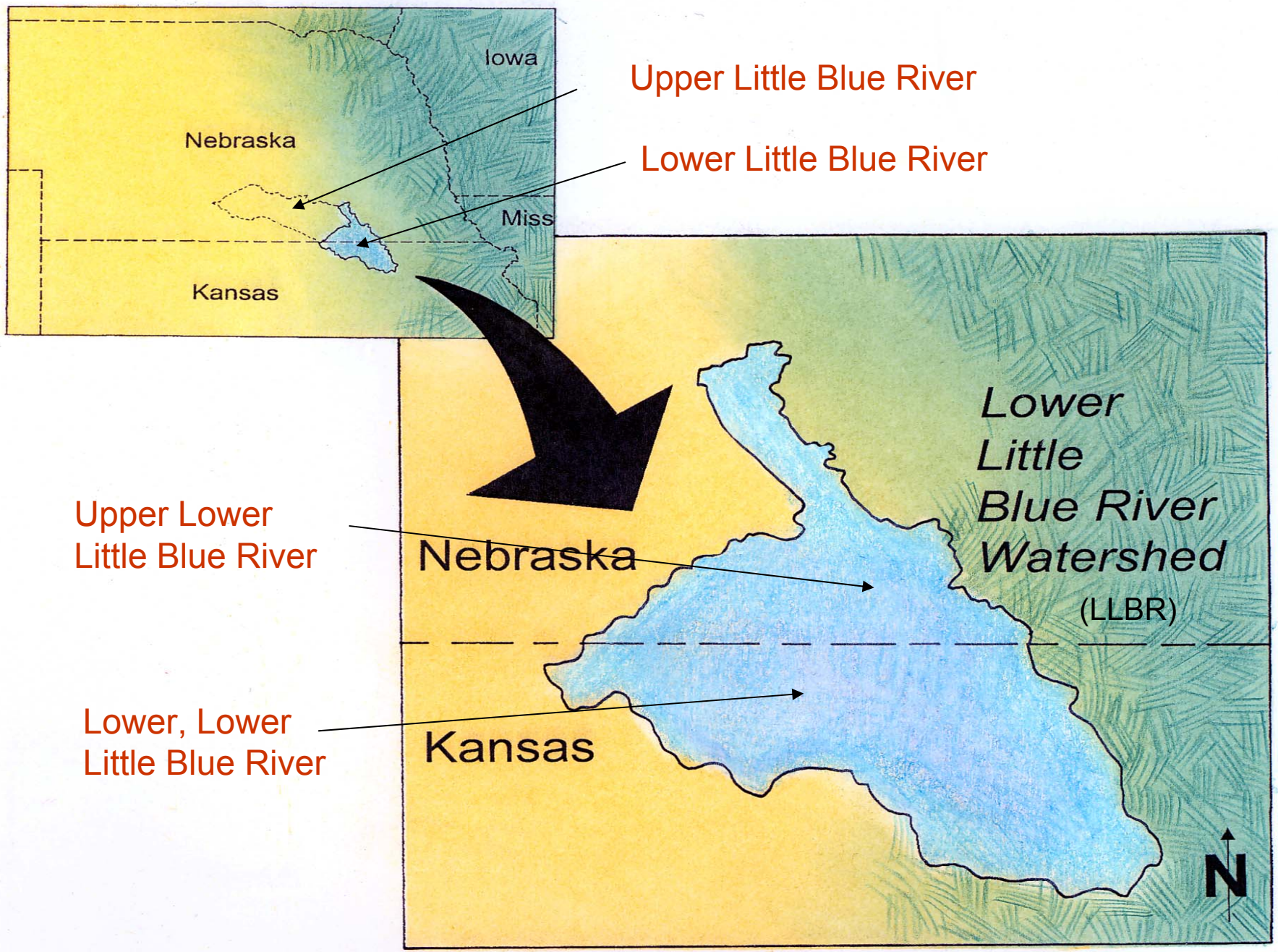
U.S. Geological Survey

Little Blue River Resources Natural Resources Conservation District

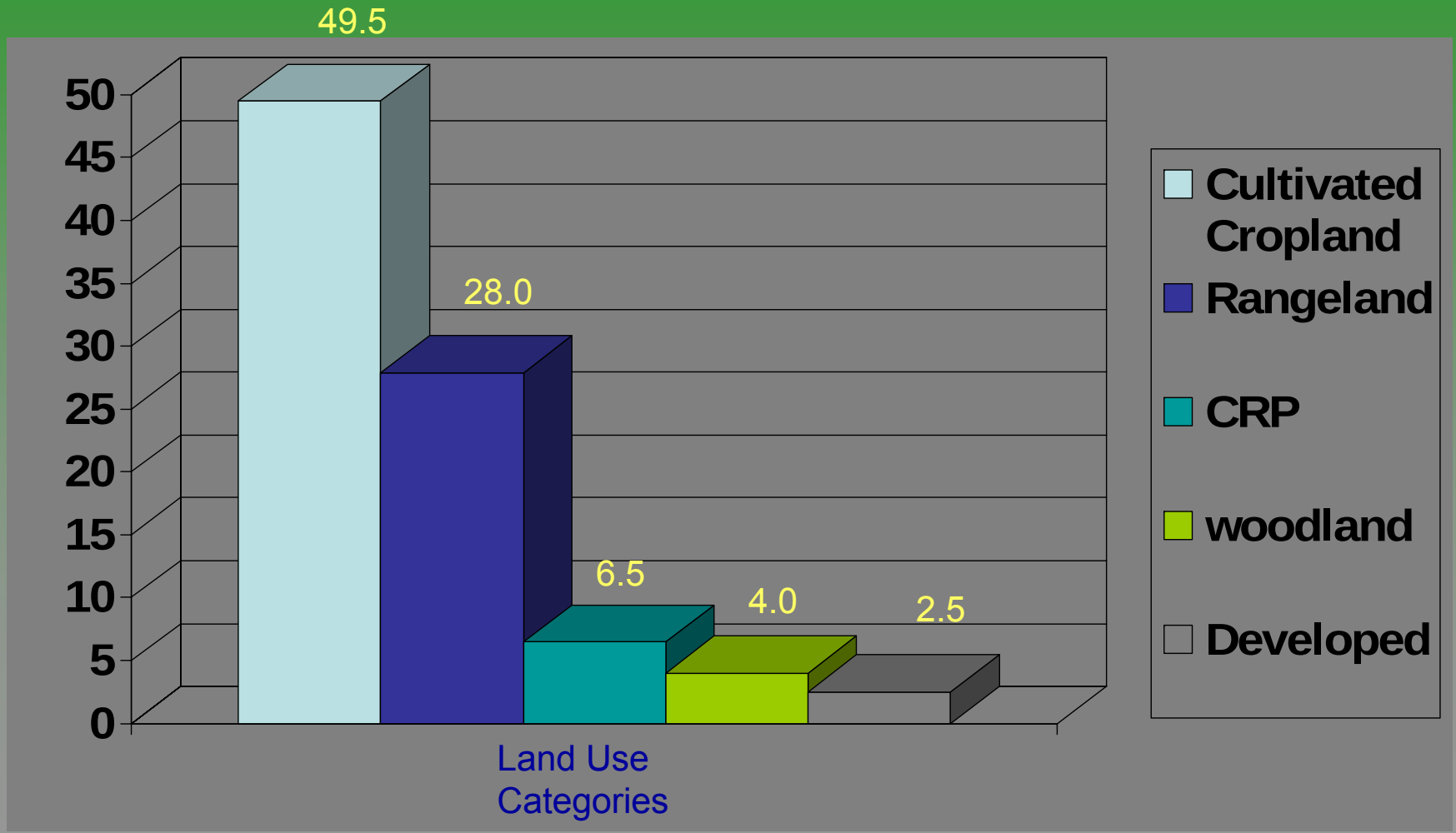
Lower Little Blue River (LLBR)

- Relatively small watershed, (1,330 mi²)
- Does not contain major metropolitan area or industrial sites,
- Within corn production region,
- Selected by NRCS as one of first watersheds for inclusion in Conservation Security Program (CSP).




Iowa
Nebraska
Miss
Kansas
Upper Little Blue River
Lower Little Blue River
Upper Lower
Little Blue River
Lower, Lower
Little Blue River
Nebraska
Kansas
Lower
Little
Blue River
Watershed
(LLBR)
N

Major Land Use in LLBR Watershed



LLBR Farm Characteristics

1,752 farms in LLBR watershed,

Average size = 594 acres,

12% of farms use irrigation on at least part of operation,

Increasing use of no-till, minimum tillage, terraced waterways, grassed waterways, riparian buffers.

Environmental Issues in LLBR Watershed

Low gradient, meandering stream with unstable banks,

Loss of cropland and riparian habitats of concern,

Sediment and nutrient loading are significant,

79% of surface waters in LLBR do not support designated uses due to
- •fecal coliform bacteria
- •eutrophication of surface waters, low dissolved oxygen

Kansas State University

Ongoing field-scale modeling and assessment to furnish Best Management Practices (BMPs) for nutrient, sediment and pesticide use.

Results indicate reductions in sediment, nitrogen potassium, and agrochemicals into LLBR.

NRCS Natural Resource Inventory

Estimated Soil Erosion Rates
LLBR

1982 = 4.7 tons/ac/yr

1997 = 3.1 ton/ac/yr

34% reduction in soil erosion over 15 year period

Source: NRCS, National Resource Inventory, FT. Worth TX

Farmers in LLBR watershed report greater numbers of wildlife associated with conservation activities.

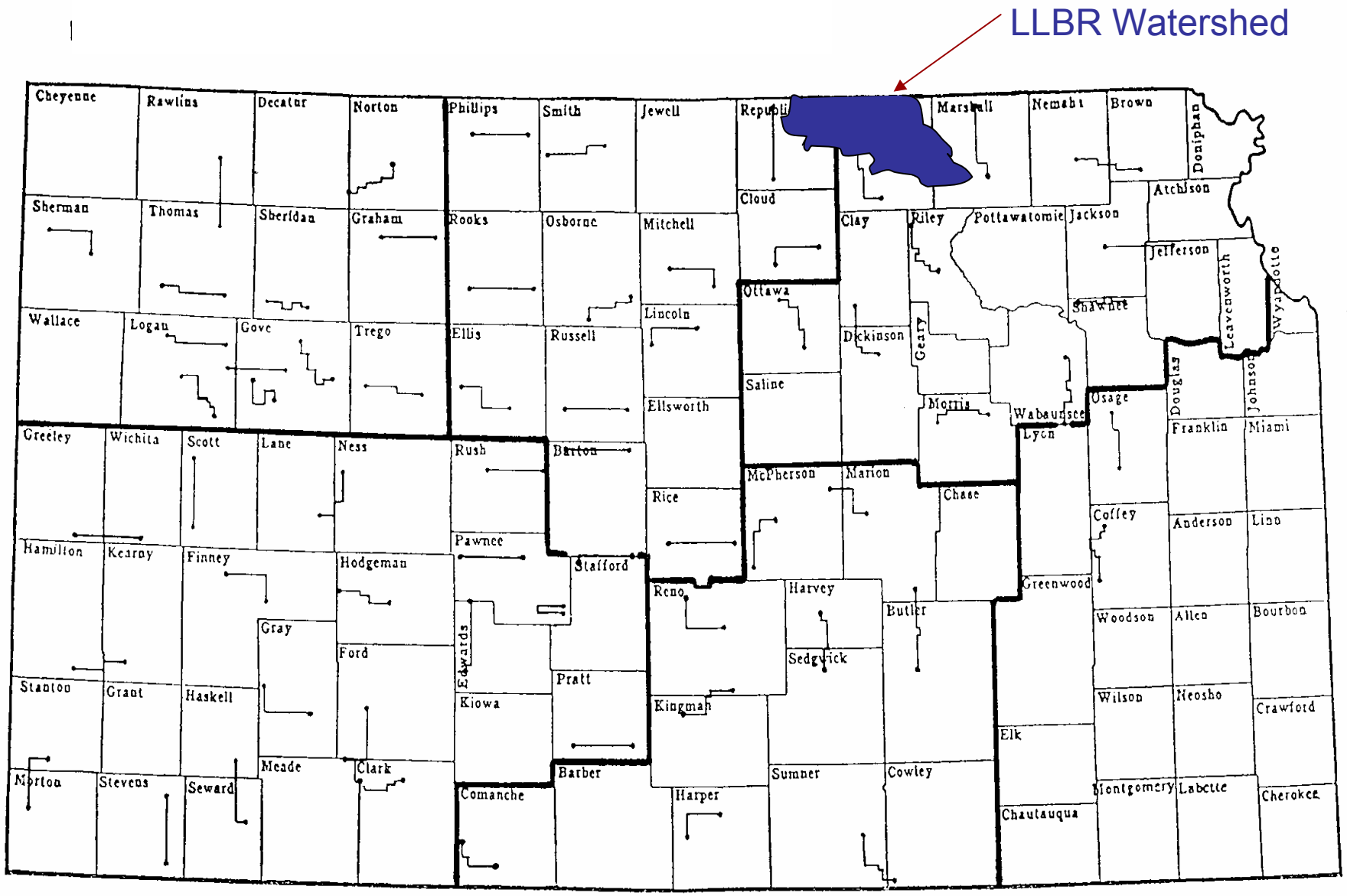
Many studies document benefits of conservation programs to wildlife.

However,

No studies are specific to the LLBR watershed.

Kansas and Nebraska pheasant and quail monitoring is completed on regional scales larger than watersheds.

Kansas Pheasant Crowing Survey Routes and Survey Regions



Erosive stream banks restored on 29 sites in LLBR

1977-2004 on 13 sites:

154 acres of cropland lost,

12.5 million tons sediment,

92,270 lbs. of nitrates,

839,271 lbs. phosphorus, and

7 million lbs. of potassium

Cooperators:

NRCS, FSA

Washington County Conservation Dist.

Kansas State Conservation Commission,

KS Dept. Health and Environment,

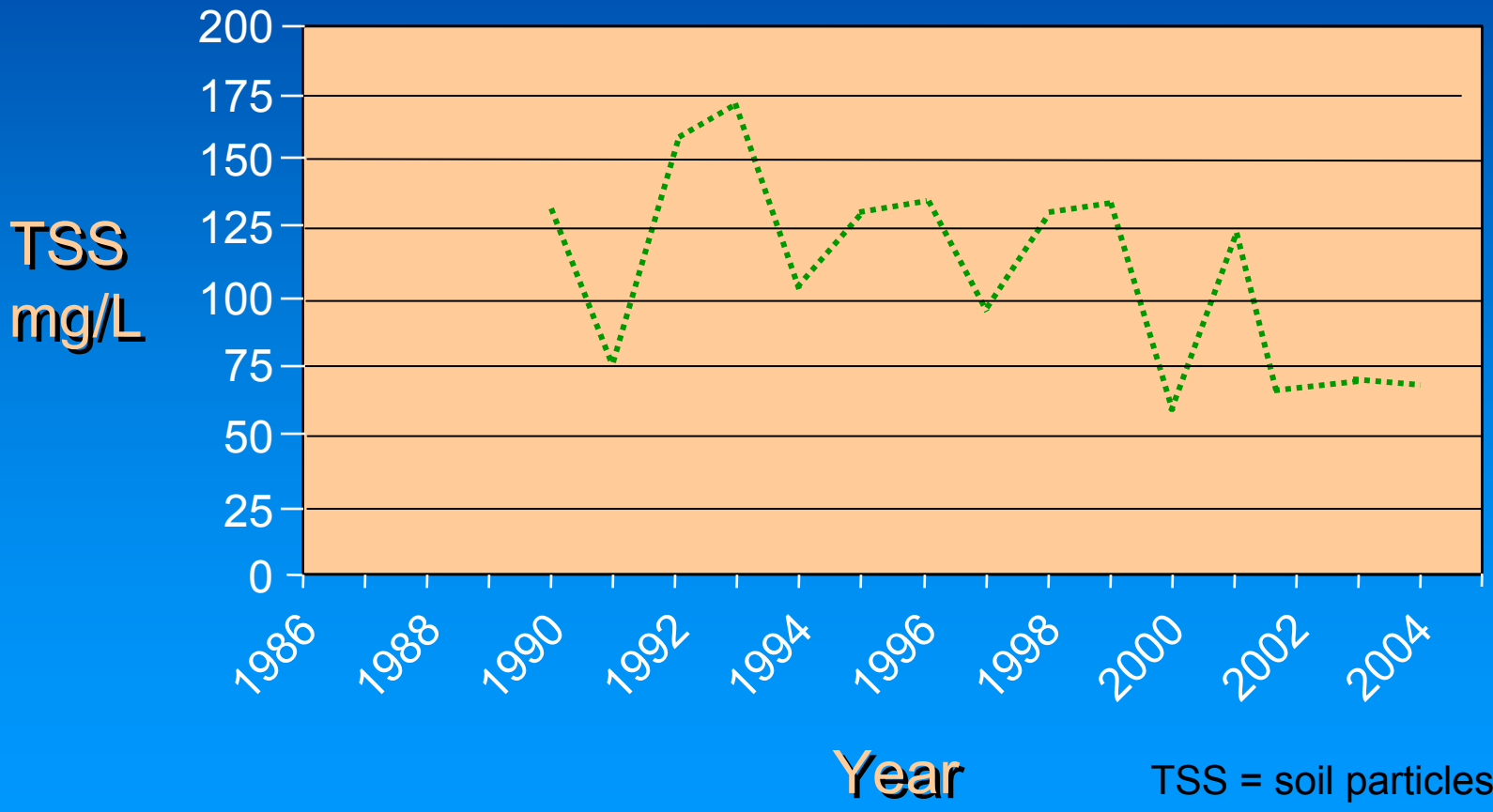
Watershed Institute

Objectives of Restoration

- Reduce nutrient input
- Improve water quality
- Improve channel characteristics
- Reduce sediment input
- Establish 100 ac. riparian habitat
- Enhance terrestrial & aquatic habitats

Budgetary constraints have prevented any follow-up monitoring

Lower Little Blue River-Total Suspended Solids (TSS)



TSS = soil particles, algae, plant debris

Source: Kansas Department of Health & Environment

ULBR 10270206

LLBR 10270207

Hydrologic Unit Code (HUC)

Conservation Reserve Program Enrollment in the LBR Hydrologic Units

Area enrolled:

		% of WS	% of CRP in watershed
ULBR	7,100 ac	63	13
LLBR	55,300 ac	37	87

CRP Conservation Practices in LBR Watershed (≈ 50,000 ac)

95% whole-field, or partial-field, grass plantings

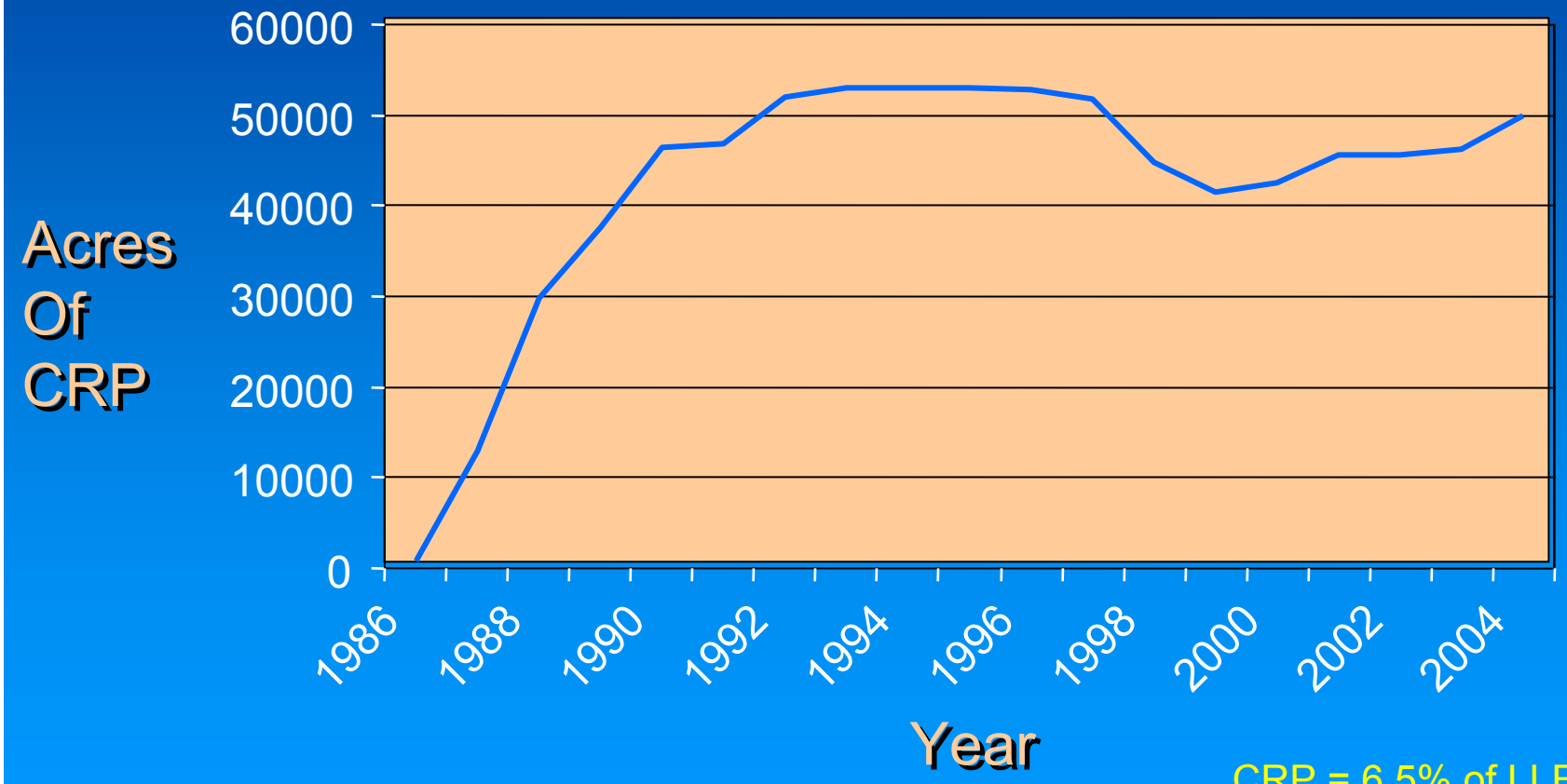
3% riparian buffers

2% all other practices

Source: FSA, Economic and Policy Analysis Staff, D.C.

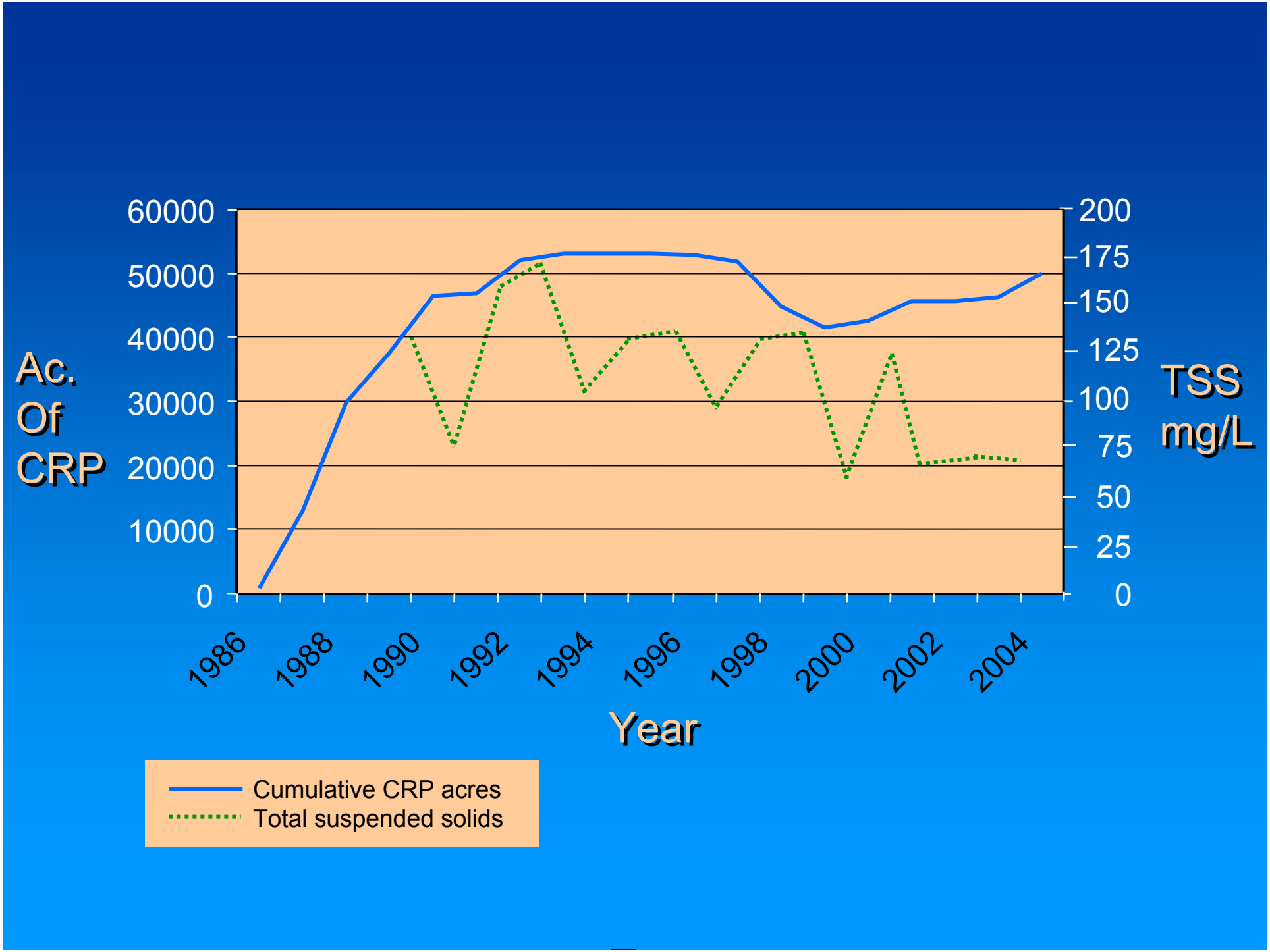
NRCS, other programs (WRP, buffers, etc.) ?

CRP acres in the Little Blue River Watershed

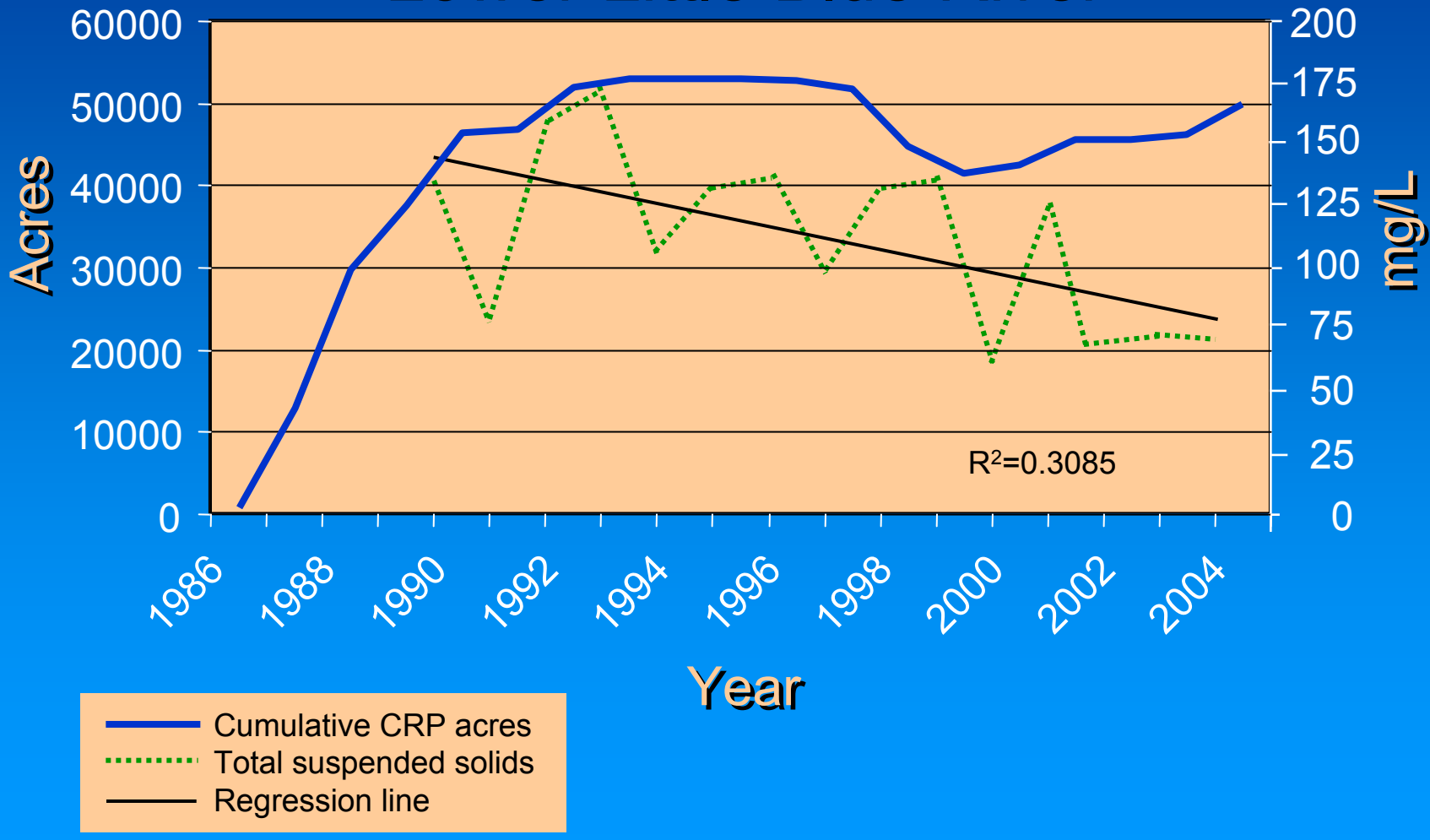


CRP = 6.5% of LLBR watershed

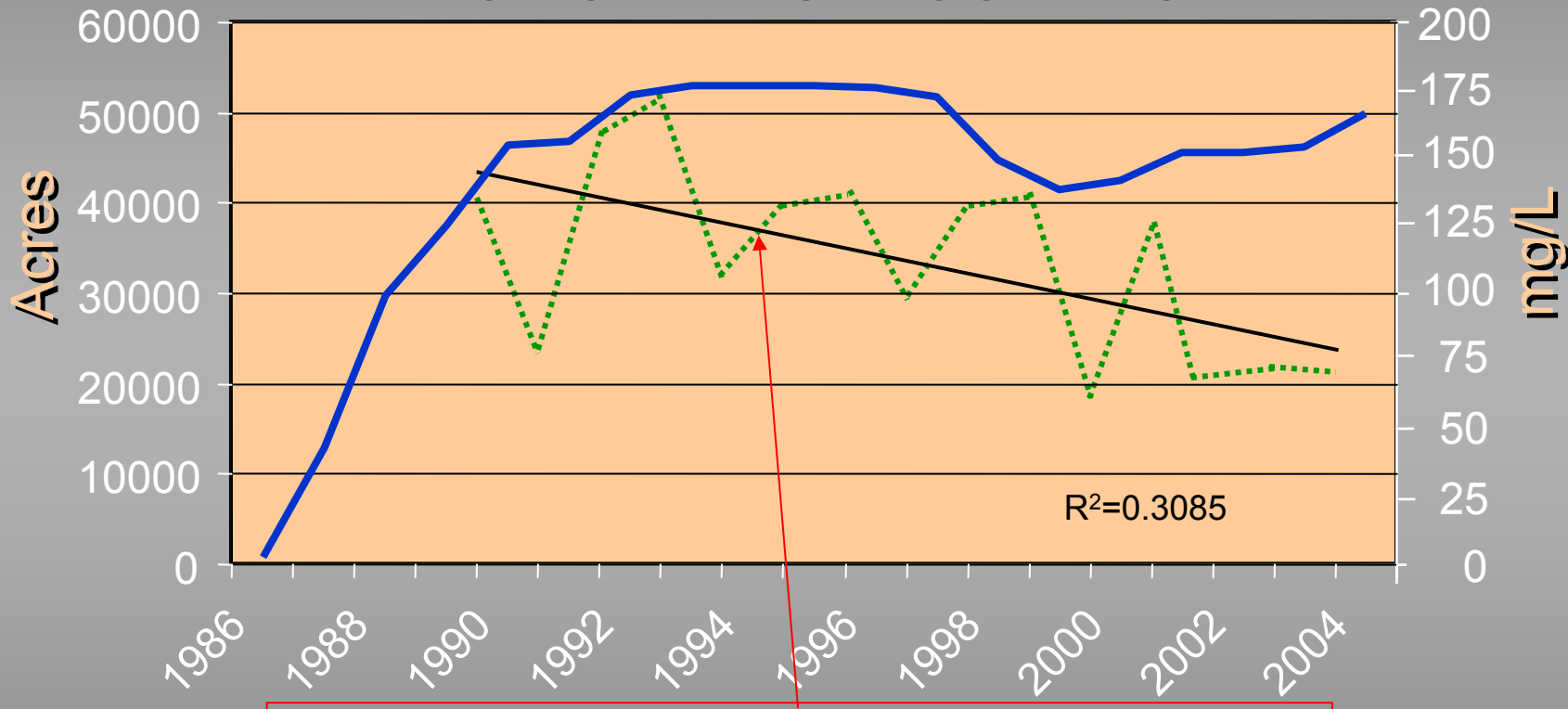
Source: FSA, Office of Policy and Economic Analysis


Ac. Of CRP
60000
50000
40000
30000
20000
10000
0
200
175
150
125
100
75
50
25
0
TSS mg/L
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
Year
Cumulative CRP acres
Total suspended solids

CRP Acres in Little Blue River Watershed and Total Suspended Solids in the Lower Little Blue River

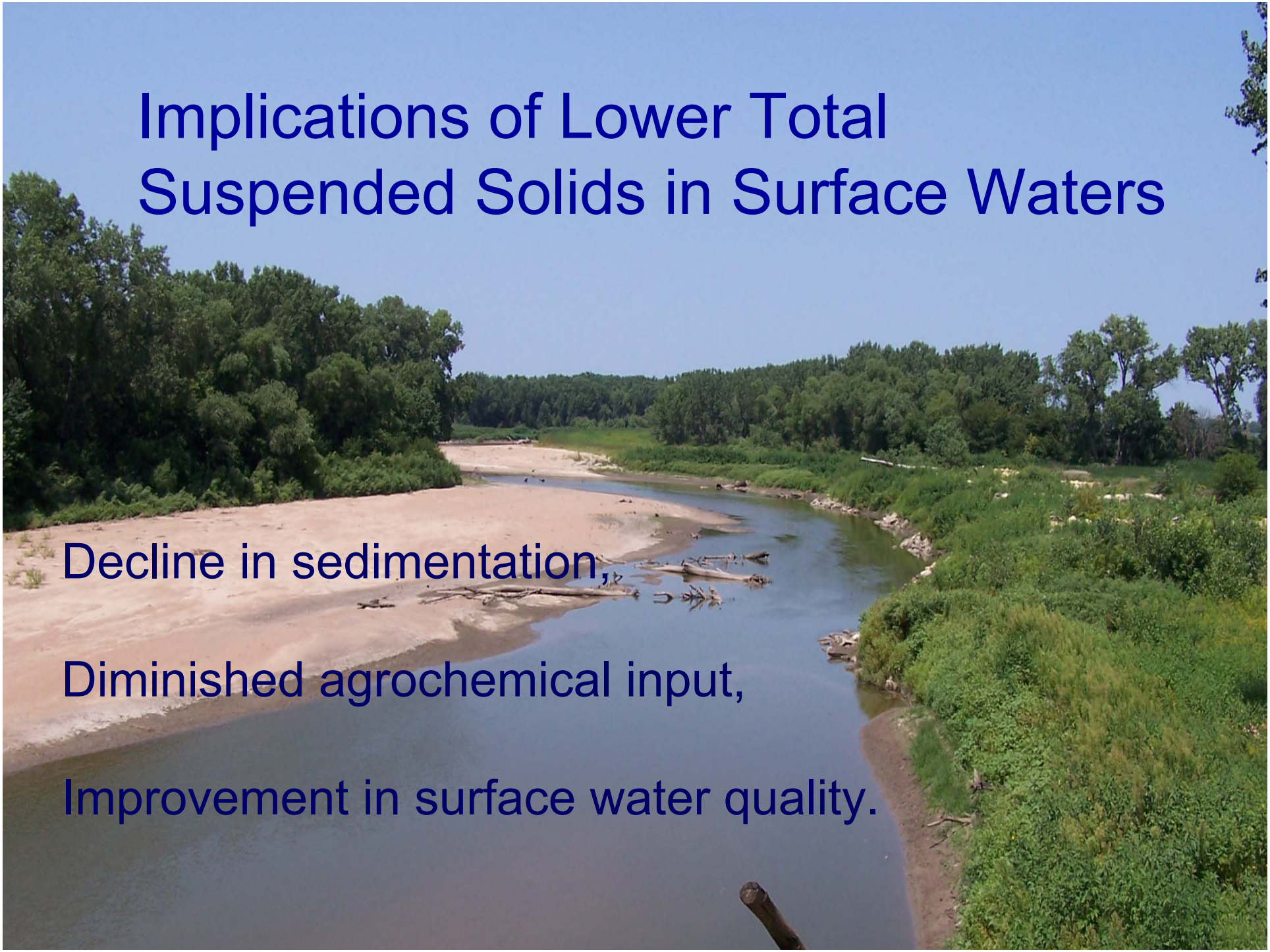


CRP Acres in Little Blue River Watershed and Total Suspended Solids in the Lower Little Blue River



Relative Contributions of:

CRP, bank restoration, no-till, other conservation practices ????????????



Implications of Lower Total Suspended Solids in Surface Waters

Decline in sedimentation,

Diminished agrochemical input,

Improvement in surface water quality.

Enhancement of aquatic habitat quality in and beyond LLBR watershed.

LLBR Farmer Focus Groups

Fairbury, NE
Washington, KS

- Farms land within the LLBR watershed,
- At least part of operation involved in production of corn,
- Participant in one, or more, USDA conservation programs.

Primary Reasons for Participation in Conservation Programs

- Desire to leave land in better condition than when they obtained it,
- Financial assistance by USDA needed to implement conservation practices.

Focus Group Perceptions:

Participants want to know if their conservation efforts are making a difference,

Greater emphasis on definition of specific, local environmental goals in conservation programs and policies,

More monitoring and description of the results brought by conservation is needed,

Communication of these results to the: farmers involved,

American public,

local and national policymakers.

Messages Focus Group Participants Would Like Delivered to Washington, D.C.

The conservation programs are working!

Improve availability and funding of programs, especially the CRP and Conservation Security Program (CSP).

Continue to focus conservation programs on soil and water, if these issues are addressed wildlife will follow.

Farmer adoption of conservation practices continues to grow,

Thousands of acres in minimum till and other conservation practices,

50,000+ acres of environmentally sensitive land enrolled in CRP,

Landowners see benefits of conservation and wish greater involvement.

University of Kansas is refining nutrient, sediment, pesticide Best Management Practices (BMPs),

NRCS NRI estimates 34% decline in soil erosion over 15 year period,

Streambanks restored on 29 sites,

Decline in suspended solids in Little Blue River waters.

Conclusions

- Impressive amount of conservation work has been completed and is under progress in LLBR,
- Synthesis & communication of results and implications have been minimal,
- No monitoring of specific conservation practices has occurred in the watershed.

Ways to Improve

- Summarize existing information, identify data gaps and needs.
- Define research and information needs for future monitoring,
- Improve coordination between State, Federal and NGOs involved,
- Furnish opportunities for farmers to voluntarily become involved in setting priorities and assessment of conservation performance,
- Enhance communication of results to the public and policy makers.