

Assessing NRCS Programs

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Assessing NRCS Impacts of NRCS Programs

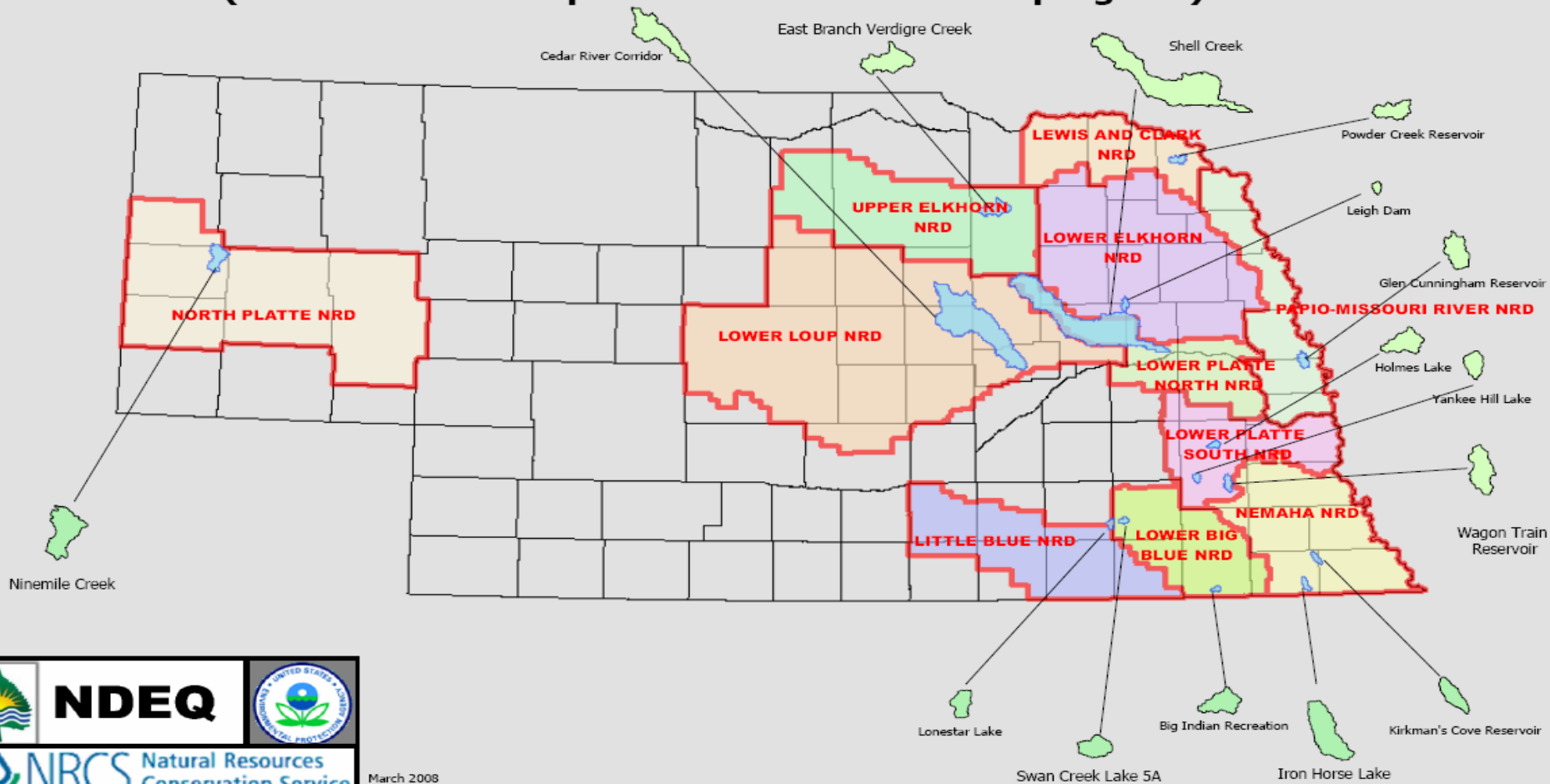
■ EQIP

- Ranking System based on costs and diversity of resource benefits.
- Grassland health, Soil Quality, wetland resources, Water quality, water quantity, wildlife habitat, air quality & energy conservation
- Provide financial assistance to producers
- WRP, WHIP, CSP and CRP

EQIP Special Initiatives

- Ground & Surface Water Conservation
- Animal Feeding Operations (AFO) Initiative
- Water Quantity Initiatives
Water savings on irrigated land with Nebraska Department of Natural Resources identified emphasis goals. Pumpkin Creek, Elm Creek, and Lodge Pole Creek. Water Quality Initiative (NDEQ Impaired Watersheds)
- Nebraska Natural Legacy Project Special Initiative

Watershed Based Planning Nebraska Watersheds (includes both completed and watersheds in progress)



 **NDEQ** 

 **NRCS** Natural Resources Conservation Service

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Quality Criteria for SWAPA Resources

- SOIL
- WATER (quantity and quality)
- AIR (quality)
- PLANTS
- ANIMALS
- Used to assess on farm benefits or limiting non-point pollution

Table 1

National and State of Nebraska Resource Concerns and Quality Criteria

Natural Resource Concern	Description of Concern	National Quality Criteria	State Quality Criteria	Measurement Units	Assessment Tools for Quality Criteria Evaluation
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WATER

Water Quality - Harmful Levels of Pesticides in Groundwater	Residues resulting from the use of pest control chemicals degrade groundwater quality.	Pesticides are applied, stored, handled, disposed of, and managed so that groundwater uses are not adversely affected.	Risk assessment tool results in LOW leaching rating or appropriate mitigation practice(s) applied to reduce risk. Reference FOTG 595.	Non Measurable	<ul style="list-style-type: none"> WIN-PST or University of Nebraska Weedsoft Software NAPRA Vadose zone and groundwater chemical sampling and assay
Water Quality - Excessive Nutrients and Organics in Groundwater	Pollution from natural or human induced nutrients such as N, P, and organics (including animal and other wastes) degrades groundwater quality.	Nutrients and organics are stored, handled, disposed of, and applied such that groundwater uses are not adversely affected.	Risk assessment tool results in LOW rating or appropriate mitigation practice(s) applied to reduce risk. Reference FOTG 590.	Non Measurable	<ul style="list-style-type: none"> Nitrate Leaching Index (Refer to 590 standard appendix A) Farm*A*Syst
Water Quality - Excessive Salinity in Groundwater	Pollution from salts such as Ca, Mg, Na, K, HCO ₃ , CO ₃ , Cl, and SO ₄ degrades groundwater quality.	Salts are stored, handled, disposed of, applied, and managed such that groundwater uses are not adversely affected.	NA	Electroconductivity (EC) – average reduction in EC for the field or planning area/unit	NA
Water Quality - Harmful Levels of Heavy Metals in Groundwater	Natural or human-induced metal pollutants present in toxic amounts degrade groundwater quality.	Materials containing heavy metals are stored, handled, disposed of, applied, and managed such that groundwater uses are not adversely affected.	NA	Non Measurable	NA

Quality Criteria used to determine existing and planned level of resource protection

■ Sheet and Rill Erosion

- Measurement Tool = RUSLE2
- Target = Soil Loss Tolerance "T"
- Measurement Units = Tons/Ac/Yr

■ Surface Water Quality Nutrients

- Measurement Tool = P-Index
- Target = Low P-index rating or medium rating with appropriate mitigation practices)
- Units = Non Measurable (index level)

**Environmental Evaluation for
Conservation Planning**

[General Form Instructions](#)

A. Client (name/address):

B. Plan ID Number (as applicable):

C. CMU/Fields/Legal desc.(as applicable):

D. Describe the Client's objective(s):

E. Describe the Purpose and Need for action:

**Planning SWAPA+H resource considerations correlating to NEPA's affected
environment, alternatives, and impacts**

F. Resource Considerations (See FOTG, Section III-Resource Quality Criteria and Section V-CPPE) √ proposed alternative Required -Attach Field Inventory Guide Sheet	H. Alternatives and Effects								
	No Action			Alternative 1			Alternative 2		
	Effects		√ if meets Quality Criteria	Effects		√ if meets Quality Criteria	Effects		√ if meets Quality Criteria
Short-term	Long-term	Short-term		Long-term	Short-term		Long-term		
SOIL									
Erosion			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
Condition			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
Other/notes									
Other/notes									
WATER									
Quantity			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
Quality			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
Other/notes									
AIR									
Quality			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
Other/notes									
PLANTS									
Suitability			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>

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Resource Issues????



TABLE 2. STATEWIDE CONSERVATION PLANNING GUIDE—RESOURCE MANAGEMENT SYSTEM (RMS) LEVEL

LANDUSE	PRIMARY RESOURCE CONCERNS	ESSENTIAL PRACTICES	OTHER PRACTICES
Cropland, Pivot Irrigated (HEL)	SOIL	328 Conservation Crop Rotation	320 Irrigation Canal or Lateral
	1) Erosion	442 Irrigation System Sprinkler	324 Deep Tillage
	a) Sheet & Rill	449 Irrigation Water Management	330 Contour Farming
	b) Wind	590 Nutrient Management	332 Contour Buffer Strips
	c) Concentrated Flow	595 Pest Management	340 Cover Crop
	d) Irrigation induced		362 Diversion
		Residue and Tillage Management	386 Field Border
	WATER	(ONE OR MORE OF THE FOLLOWING):	388 Irrigation Field Ditch
	1) Quantity	329 No-Till/Strip Till/Direct Seed	393 Filter Strip
	a) Water Management, Irrigated	344 Seasonal	412 Grassed Waterway
	2) Quality	345 Mulch Till	428A Ditch and Canal Lining
	a) Ground Water Contaminants	346 Ridge Till	430CC-430HH Irrigation Water Conveyance Pipeline
	b) Surface Water Contaminants		585 <u>Stripcropping</u>
			589A Cross Wind Ridges
	PLANTS		589C Cross Wind Trap Strips
	1) Condition		600 Terrace
	a) Productivity		603 Herbaceous Wind Barriers
	a) Pest Management		620 Underground Outlet
			633 Waste Utilization
			638 Water & Sediment Control Basin
		642 Water Well	

Secondary Resource Concerns that may be addressed by practice installation: Soil Condition: (Tilth, crusting, infiltration, Organic Matter and Compaction), Soil Deposition: (Onsite and Offsite Sediment Delivery), Water Quantity (Irrigation Water Conveyance/reduced seepage), Air Quality (airborne sediment, odors), and Wildlife Habitat (food and cover)

Conservation System



FILTER STRIP SURFACE WATER	IMPACTS	BASIS
<ul style="list-style-type: none"> Harmful Levels of Pesticides 	Slight to Substantial Improvement	The action reduces runoff and traps adsorbed pesticides. Also, the strips may attract beneficial insects or trap insect pests, reducing the need for pesticide applications.
<ul style="list-style-type: none"> Excessive Nutrients and Organics 	Substantial Improvement	Solid organics and sediment-attached nutrients are filtered out. Soluble nutrients infiltrate the soil and may be taken up by plants or utilized by soil organisms.
<ul style="list-style-type: none"> Excessive Suspended Sediment and Turbidity 	Substantial Improvement	Vegetation protects soil surface and traps sediment, nutrients and other materials.
<ul style="list-style-type: none"> Excessive Salinity 	Slight Improvement	The action slows runoff, which may increase water infiltration, reducing the potential for transport of salts to surface water.
<ul style="list-style-type: none"> Harmful Levels of Heavy Metals 	Moderate to Substantial Improvement	Runoff containing heavy metals is slowed, trapping sediment and increasing infiltration into the

PRS Overview

- **Purpose** provide the link between the day-to-day activities on the landscape and the agency's long-term strategic objectives (tied to agency and state specific goals!!!)
- **Data Quality** Regular review of performance data by users and oversight staff throughout the year
- **Data Entry Points** appropriate automated business tools, Customer Service Toolkit, ProTracts, or POINTS
- **Reporting Frequency** is automatic for performance data harvested from the automated business tools. Some items must be entered using PRS screens or program tracking business tools
- **Performance Measures (Qualitative)**

Performance Measure Numbering System

The annual performance measures are numbered to align with the new agency strategic plan according to the table below:

Measure Number		Strategic Plan Goal
Series	Sub-Series	
0		Multiple Strategic Goals
1		High Quality, Productive Soils
	1.1	Cropland Soil Quality
2		Clean and Abundant Water
	2.1	Water Quality
	2.2	Water Conservation
3		Healthy Plant and Animal Communities
	3.1	Grassland, Rangeland, and Forest Ecosystems
	3.2	Working Lands and Waters for Wildlife
	3.3	Wetlands
4		Clean Air - reserved
5		Adequate Energy - reserved
6		Working Farms and Ranch Lands
	6.1	Viable Agricultural Sector and Natural Resource Quality

Measure: 0.10: Conservation plans written, acres	5
Measure: 0.20: Watershed or area-wide conservation plans developed, number .	6
Measure: 1.00: Digital soil surveys (SSURGO) made available, number.....	8
Measure: 1.01: New or updated Web Soil Surveys, number.....	8
Measure: 1.02: Soil surveys mapped or updated, acres.....	9
Measure: 1.10: Cropland with conservation applied to improve soil quality, acres	10
Measure: 2.00: Water supply forecasts issued, number.....	12
Measure: 2.10: Land with conservation applied to improve water quality, acres	12
Measure: 2.11: Comprehensive nutrient management plans (CNMP) written, number	15
Measure: 2.12: Comprehensive nutrient management plans (CNMP) applied, number	16
Measure: 2.13: Long-term contracts completed during the fiscal year (all measures installed) for the purpose of water quality improvement, number.	17
Measure: 2.20: Land with conservation applied to improve irrigation efficiency, acres.....	18
Measure: 2.21: Dams rehabilitated or removed, number.....	19
Measure: 2.22: Dams with watershed rehabilitation plans authorized, number.	20
Measure: 2.23: Flood prevention or mitigation measures installed, including structures, easements, and other measures; number.....	21
Measure: 2.24: Multi-purpose water supply reservoirs installed, number.	21
Measure: 3.00: New plant materials released to commercial growers, number .	22
Measure: 3.01: Plant materials technical documents prepared and transferred to	

Measure: 2.23: Flood prevention or mitigation measures installed, including structures, easements, and other measures; number.....	21
Measure: 2.24: Multi-purpose water supply reservoirs installed, number.	21
Measure: 3.00: New plant materials released to commercial growers, number .	22
Measure: 3.01: Plant materials technical documents prepared and transferred to customers, number.	23
Measure: 3.10: Grazing and forest land with conservation applied to protect and improve the resource base, acres.....	24
Measure: 3.20: Non-Federal land with conservation applied to improve fish and wildlife habitat quality, acres.....	26
Measure: 3.30: Wetlands created, restored, or enhanced, acres.....	27
Measure: 6.10: Farmland, forest land, and wetlands protected by conservation easement, acres.....	28
Measure: 6.11: Prime, unique, or important farmland protected by conservation easements from conversion to non-agricultural uses, acres.....	30
Measure: 6.12: Land and water resources benefitted by RC&D projects, acres..	31
Measure: 6.13: Local businesses created or retained in rural communities, number.....	32

MEASURE and TARGETED PROG

		1.10 Soil Quality CTA & EQIP	2.1 Water Quality CTA, CTA-GLC, EQIP, CRP, WRP	2.20 Irrigation Efficiency CTA, CTA- GLC, EQIP, EQIP-GSWC	3.10 Grazingland CTA, CTA- GLC, EQIP	3.2 C GL Wt
Practice	Units					
Pasture and Hay Planting	ac	X			X	
Pest Management	ac	X	X		X	
Pipeline	ft				X	
Pond	no				X	
Prescribed Burning	ac				X	
Prescribed Grazing	ac		X		X	
Pumping Plant	no			X	X	
Range Planting	ac				X	
Residue and Tillage Management, Mulch Till	ac	X	X			
Residue and Tillage Management, No-Till/Strip Till/Direct Seed	ac	X	X			
Residue and Tillage Management, Ridge Till	ac	X	X			
Residue Management, Seasonal	ac	X				
Restoration & Mgt of Rare & Declining Habitats	ac				X	
Riparian Forest Buffer	ac	X	X		X	
Riparian Herbaceous Cover	ac		X		X	
Roof Runoff Structure	no		X			
Row Arrangement	ac	X				
Salinity and Sodic Soil Management	ac	X	X	X	X	
Sediment Basin	no		X			
Spring Development	no				X	
Stream Crossing	no				X	
Stream Habitat Improvement and Management	ac		X		X	
Streambank and Shoreline Protection	ft		X		X	
Stripcropping	ac	X	X			

Measure: 2.10: Land with conservation applied to improve water quality, acres

■ **Definition:**

- Land on which at least one selected conservation practice to improve water quality has been applied during the fiscal year
- All land uses are eligible.
- Performance is reported in acres

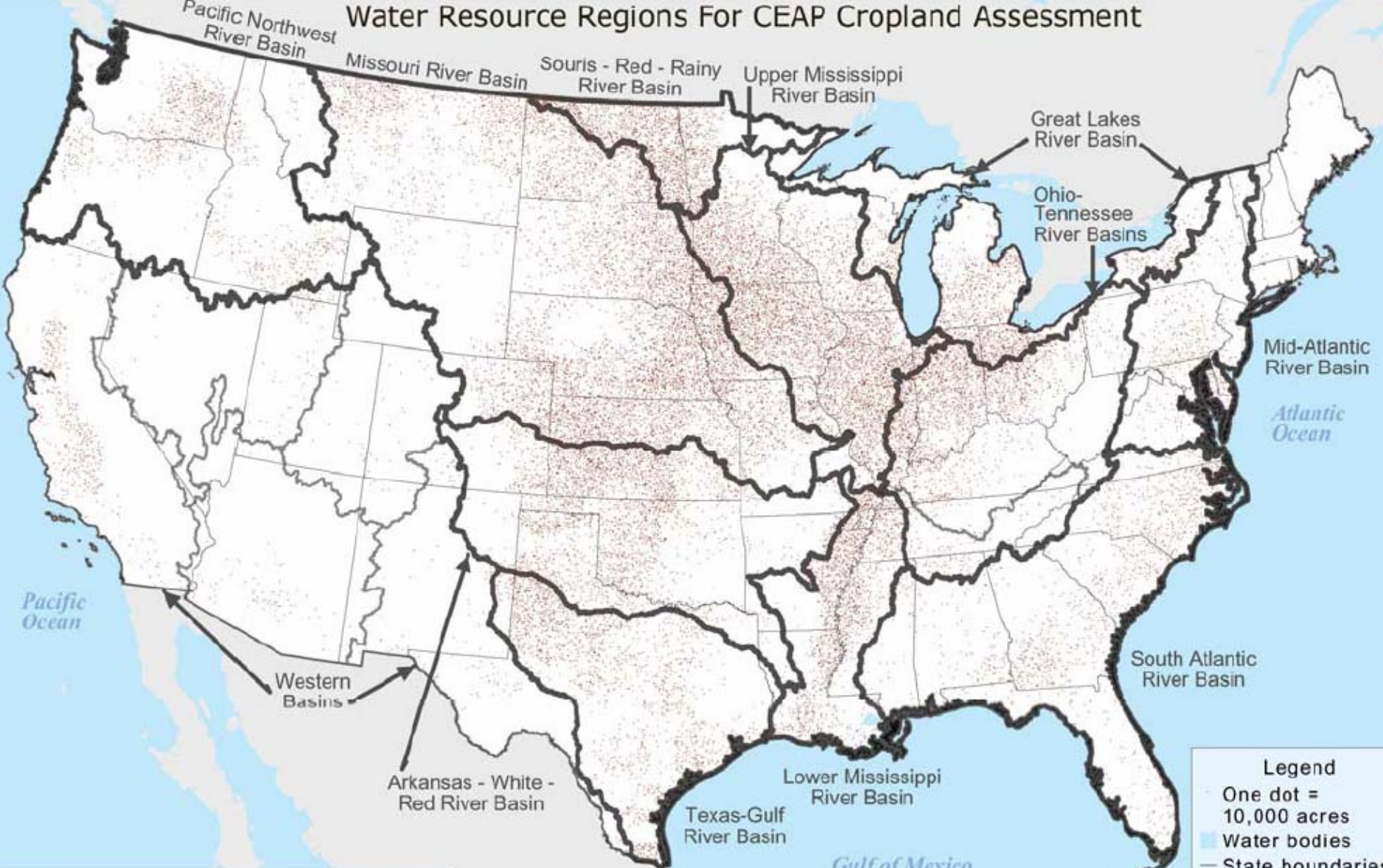
■ **Strategic Plan Outcome**

- The quality of surface waters and ground water is improved and maintained to protect human health, support a healthy environment, and encourage a productive landscape.

■ **Selected conservation practices:**

- Appropriate practices that provide benefits are credited
- Multiple practices applied are given more credit than single one's

Water Resource Regions For CEAP Cropland Assessment



Legend

- One dot = 10,000 acres
- Water bodies
- State boundaries
- Major river basins

Source: 2003 Annual National Resources Inventory

Map ID: m9927p

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