

Lesser Prairie-Chicken Conservation Plan & Mitigation Framework



Jim Pitman



Jon Ungerer

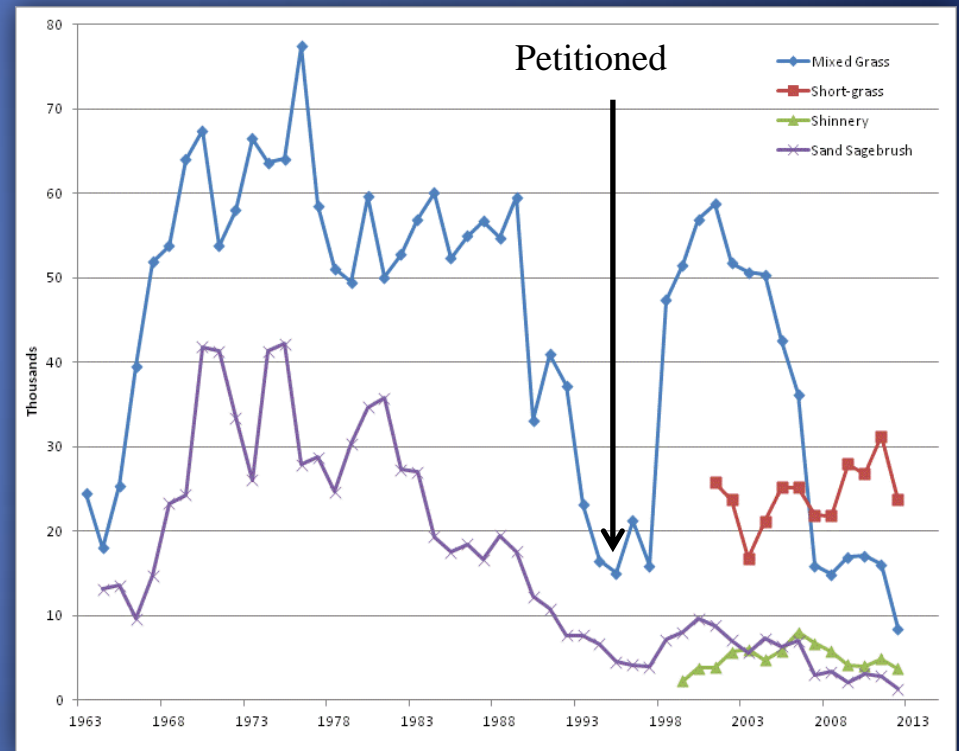


Rod Winkler



How did we get here?

- Candidate status given to LEPC in 1998 by USFWS
 - Priority level elevated in 2010
- Court settlement in 2011
 - proposed threatened in Dec. 2012
 - Final listing decision by Sept. 2013



What are we doing about it?

Conservation planning effort initiated in June 2012 by Western Association of Fish & Wildlife Agencies (WAFWA)

- biologists, agencies, landowner organizations, energy industries, NGOs, municipalities, private landowners, etc.
- Conservation implementation teams and 3 working groups: science team, conservation banking committee, and voluntary offset committee
- Public meetings and written comments



LEPC Conservation Plan

3rd Draft Released on April 1

Objective

- Long-term existence of LEPC & avert the need for a federal listing

Major Plan Components

1. Population. & habitat goals
2. Best locations for conservation & development
3. Improved coordination among conservation agencies
 - a) NRCS
 - b) FSA
 - c) Numerous other agencies/organizations
4. WAFWA Mitigation Framework
 - a) Reduces threat identified by USFWS



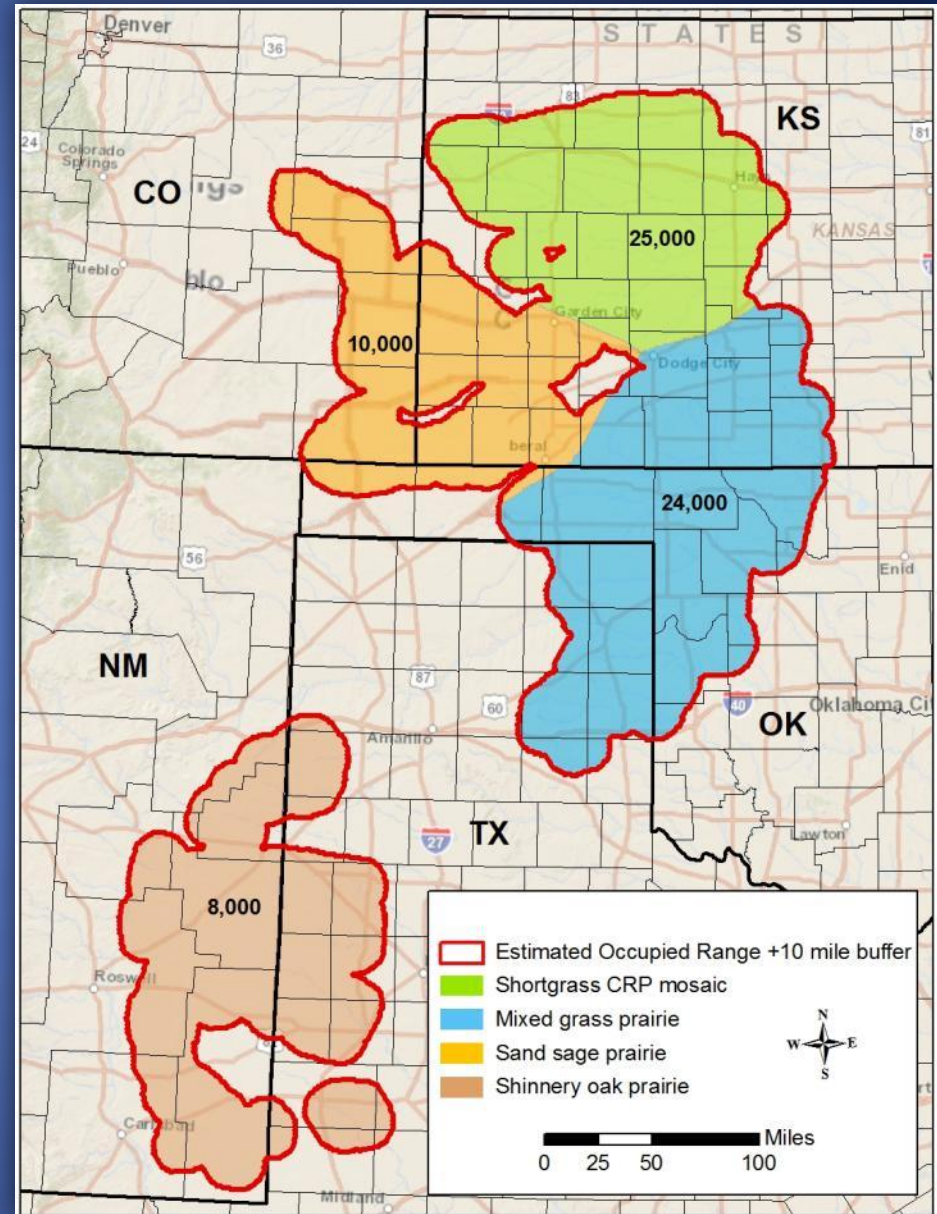
Range-wide Conservation Plan for the Lesser Prairie-Chicken

Jonathan B. Haufler, Grant Beauprez, David Klute, Sean Kyle, Jim Pitman, Doug Schoeling, Bill Van Pelt, and Christian Hagen

April 1, 2013

LEPC Population Goals

- 10-yr avg. of 67,000 birds
 - 2012 estimate of ~37,000
- Planned pop. increases
 - Sand sagebrush
 - Shinnery Oak
 - Mixed Grass
- Planned pop. maintenance
 - Shortgrass/CRP
- Survey to assess progress



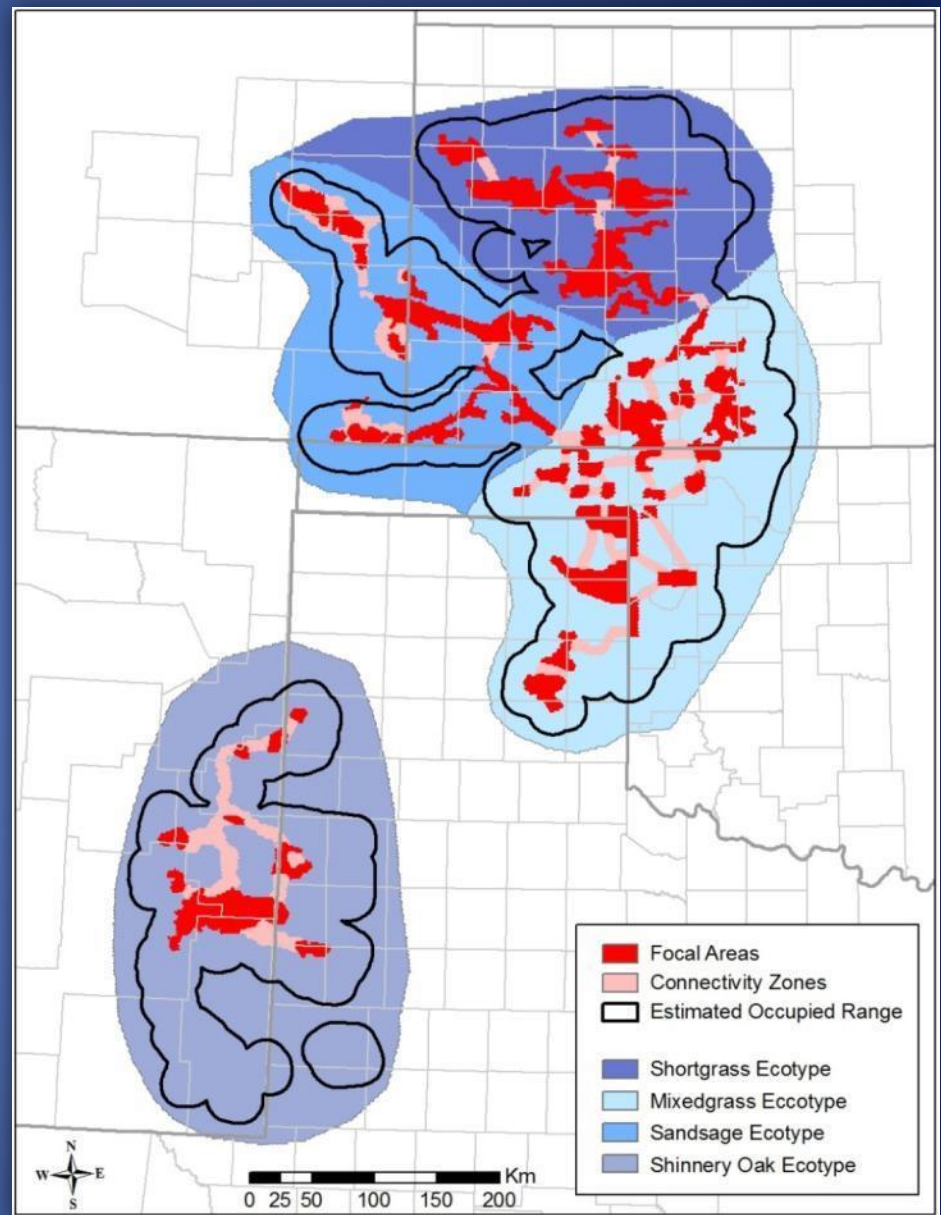
Focal Areas & Connectivity Zones

Ecoregion	Focal Area Acres	Connectivity Zone Acres
Sand Sagebrush	1,583,360	245,120
Shortgrass/CRP	1,872,640	183,680
Mixed Grass	2,576,000	1,116,160
Shinnery Oak	1,046,400	892,800
Total	7,078,400	2,437,760

Kansas

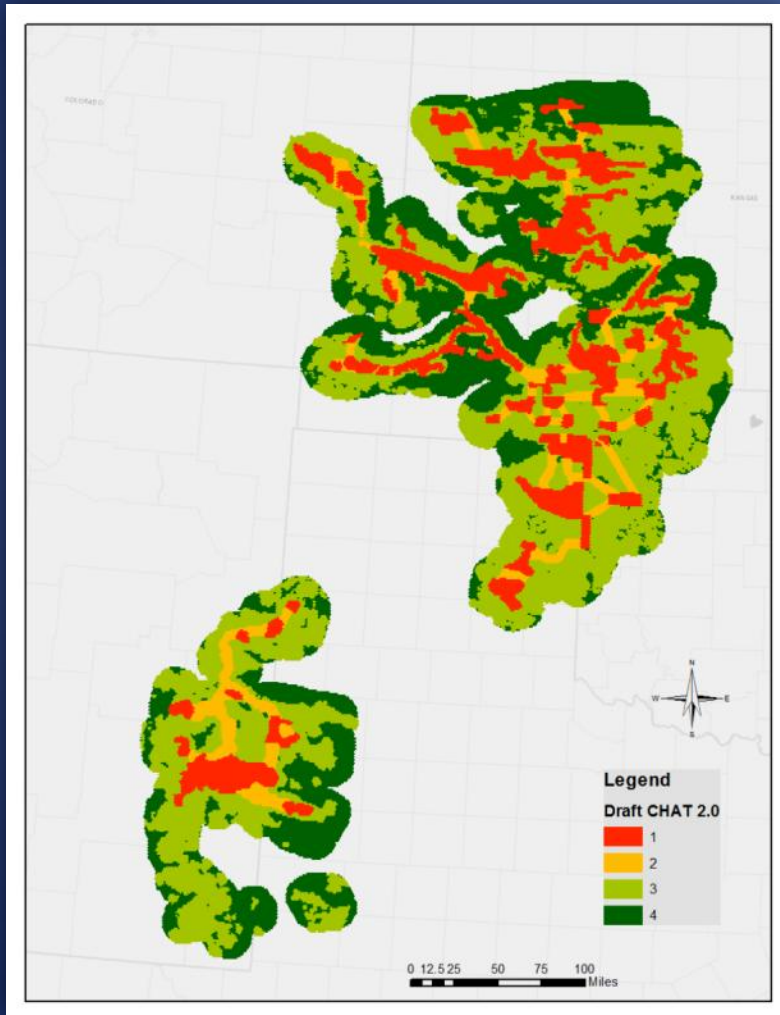
3,907,840

532,480



Detailed KS maps: <http://www.ksre.k-state.edu>

LEPC Crucial Habitat Assessment Tool (CHAT)

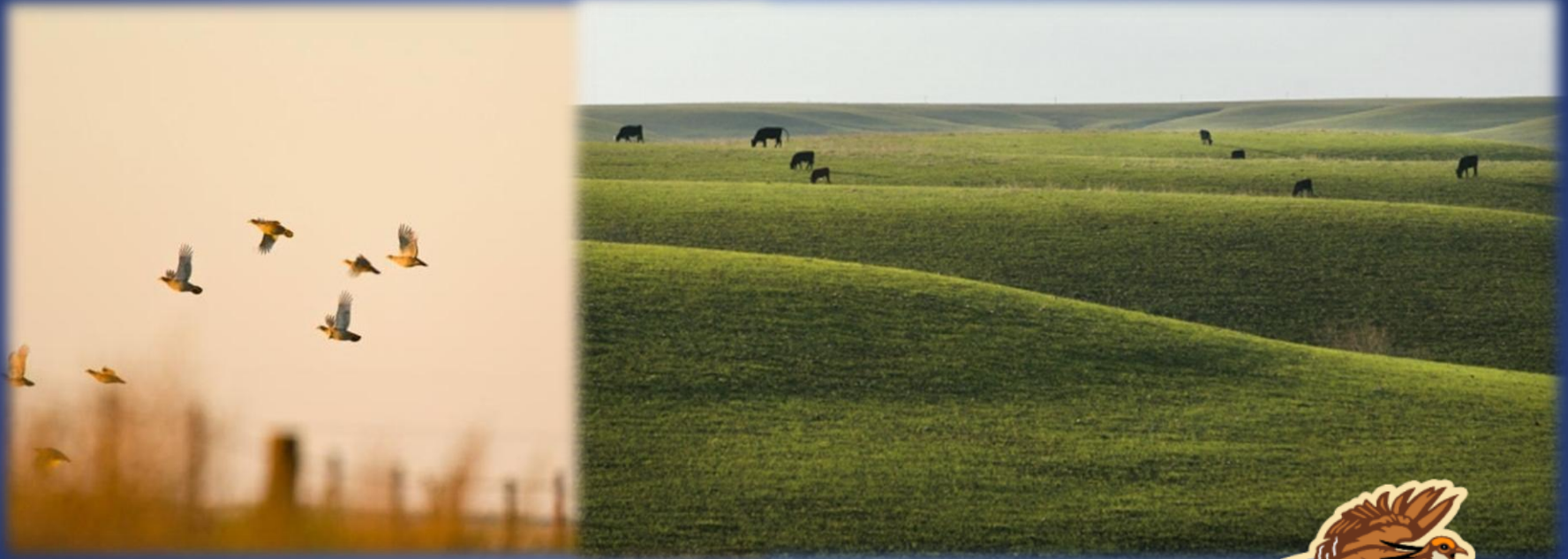


CHAT Category	Description
CHAT 1	Focal Areas
CHAT 2	Connectivity Zones
CHAT 3	Known leks & predicted habitat
CHAT 4	Remainder of range (+10 mi.)

USDA
Conservation Programs

NRCS

Lesser Prairie-Chicken Initiative



Jon L. Ungerer, LPCI Coordinator, Marysville, KS
jon.ungerer@ks.usda.gov (785) 562-5343 ext. 1131

Christian A. Hagen, Oregon State University, LPCI Science Advisor
Christian.Hagen@oregonstate.edu (541) 410-0238



What is LPCI?



- NRCS started in 2010
 - targeting LEPC habitat on working lands
- Financial Assistance (FA) & Technical Assistance (TA)
- Environmental Quality Incentives Program (EQIP)
- Wildlife Habitat Incentives Program (WHIP)
 - recently Working Lands for Wildlife (WLFW)



What is LPCI?



3 Primary Goals -

- Transform idle lands to working lands
 - Expiring CRP to grazing
- Improve grazing lands sustainability
 - Develop grazing plans
 - Optimize grass production for habitat and profitability
- Remove invasive woody species
 - Eastern red cedar
 - Honey mesquite



Practices Available through LPCI

Access Control	Access Road
Brush Management	Cover Crop
Critical Area Planting	Fence
Firebreak	Forage and Biomass Planting
Forage Harvest Management	Grade Stabilization Structure
Herbaceous Weed Control	Obstruction Removal
Pipeline	Pond
Prescribed Burning	Prescribed Grazing
Pumping Plant	Range Planting
Restoration of Rare and Declining Habitats	Upland Wildlife Habitat Management
Spring Development	Tree/Shrub Establishment
Water Well	Watering Facility



Screening and Ranking

Current Screening and Ranking Tools

- Current Range
- Action Area
- Crucial Habitat Assessment Tool (CHAT)



Screening & Ranking

Future Screening and Ranking Tools

- Focal Areas
- Connectivity Zones
- CHAT
- Action Area



Current – Future Efforts

Conference Report to Conference Opinion

- **Conference Report**
 - Conditioning of practices
 - Assurances for producers
- **Conference Opinion**
 - Quantifies Incidental Take
 - Important if bird is listed under ESA provisions



Conference Report to Opinion

- 26 Practices Considered
- Quantify Take for five practices
 - 314 Brush Management
 - 338 Prescribed Burning
 - 382 Fence
 - 510 Forage Harvest Management
 - 528 Prescribed Grazing



**LESSER PRAIRIE - CHICKEN
INITIATIVE**

Conference Report to Opinion

- Additional Practices

- 612 – Tree and Shrub planting -Amended to CR

- 384 – Forest Slash Treatment – Add to opinion

- Utilized for removal of standing carcasses

- Eastern Red Cedar

- Mesquite



Conference Report to Opinion

- Additional Practices
 - 561 – Heavy Use Area Protection – Add to opinion
 - No longer included in Watering Facility payment
 - 734 – Wildlife Structures – Add to opinion
 - Interim practice
 - Discussed in current write up for 645
 - Will roll over when standard is final



• LPCI 2010-2012 Contracts

State	Contracts	Dollars	Acres	2012**	
				Contracts	Acres
Colorado	11	\$793,834	51,378	3	33,883
Kansas	109	\$2,964,497	48,783	36	35,659
New Mexico	19	\$1,547,621	177,165	9	83,332
Oklahoma	46	\$1,551,993	47,805	13	28,697
Texas	438	\$12,572,047	392,256	21	48,780
Totals	623	\$19,429,992	717,387	82	230,351

**Protracts data 1/16/13

\$5.3 million in 2012



Just since 2010....this has happened on the ground

- 567 participating producers
- 693,406 acres benefitted
- \$18.3M invested

461,380 acres improved grazing systems



404 miles of high risk fence marked or moved



157,650 acres of invasive woody vegetation treated



LESSER PRAIRIE-CHICKEN INITIATIVE

Lesser Prairie Chicken Initiative (LPCI) Action Area Contract Acres by 12-digit watershed FY 2010 through FY 2012, EQIP and WHIP Programs

There are a total of 373 LPCI EQIP and WHIP contracts in 257 watersheds represented on this map. Contract Acres totals 636,028.

Legend

- State Boundaries
- ▭ Lesser Prairie Chicken Historic Range
- ▭ Lesser Prairie Chicken Action Area

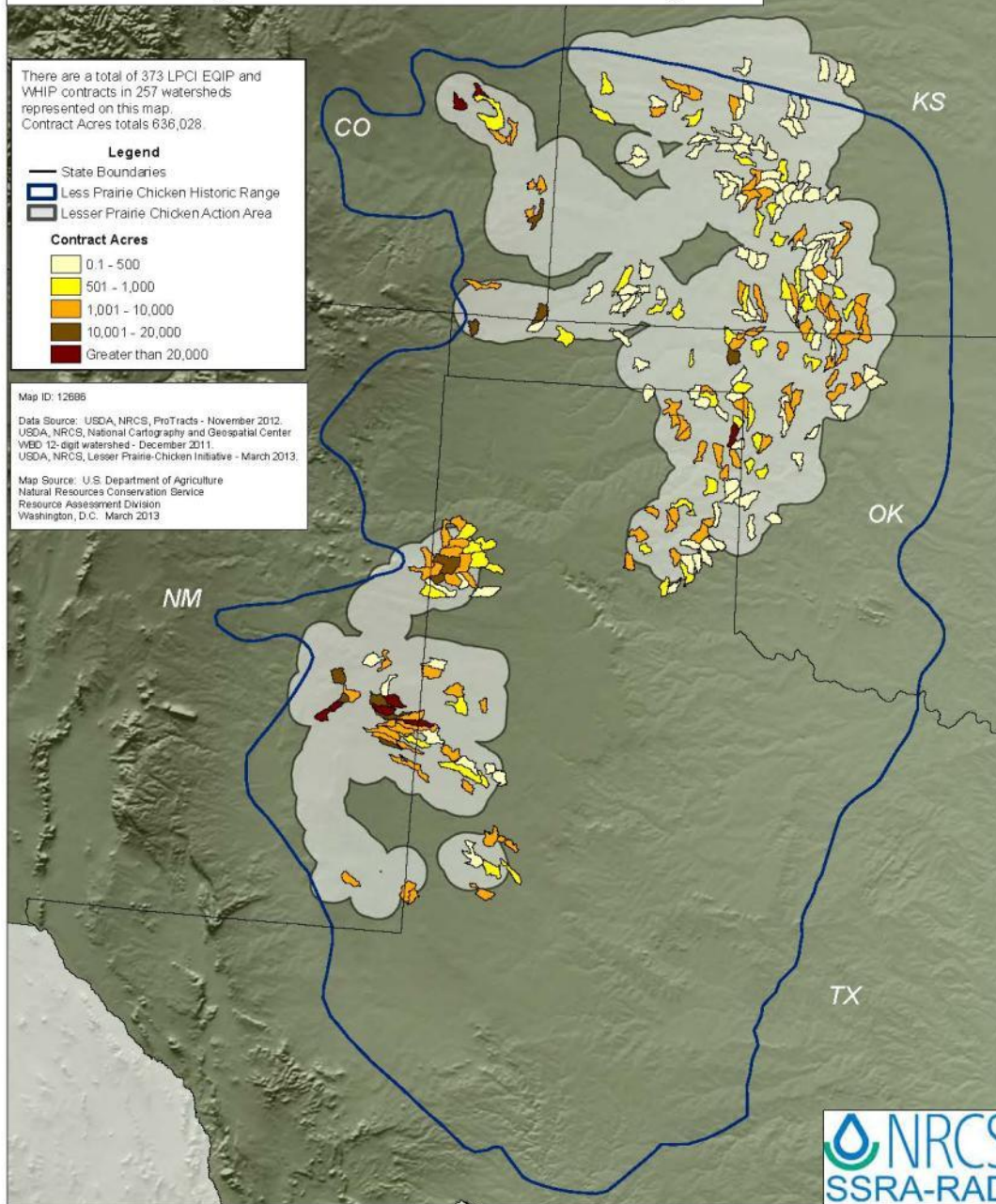
Contract Acres

- 0.1 - 500
- 501 - 1,000
- 1,001 - 10,000
- 10,001 - 20,000
- Greater than 20,000

Map ID: 12688

Data Source: USDA, NRCS, ProTracts - November 2012.
USDA, NRCS, National Cartography and Geospatial Center
WBD 12-digit watershed - December 2011.
USDA, NRCS, Lesser Prairie-Chicken Initiative - March 2013.

Map Source: U.S. Department of Agriculture
Natural Resources Conservation Service
Resource Assessment Division
Washington, D.C. March 2013



Conservation Reserve Program



Rod J. Winkler, CRP Program Specialist, Manhattan, KS
rod.winkler@ks.usda.gov (785) 564-4769



Conservation Reserve Program

- Authorized -1985 Farm Bill
- 39.0 million acres/ current 32.0 million
- Objective
 - Original – Soil Conservation – Permanent Covers, supply control
 - Evolved – Wildlife, Water, Wetlands, Trees - Resource Protection
- Extensive Resource Protection
 - 2.4 million acres enrolled in Kansas, 27.0 million acres Nationally
 - 30 + separate Conservation Practices



Conservation Reserve Program

Three ARMS of CRP

- General Enrollment – (May 20 – June 14)
- Continuous Enrollment – CCRP
- Conservation Reserve Enhancement Program-
CREP



Conservation Reserve Program

Targeting Protection for LEPC:

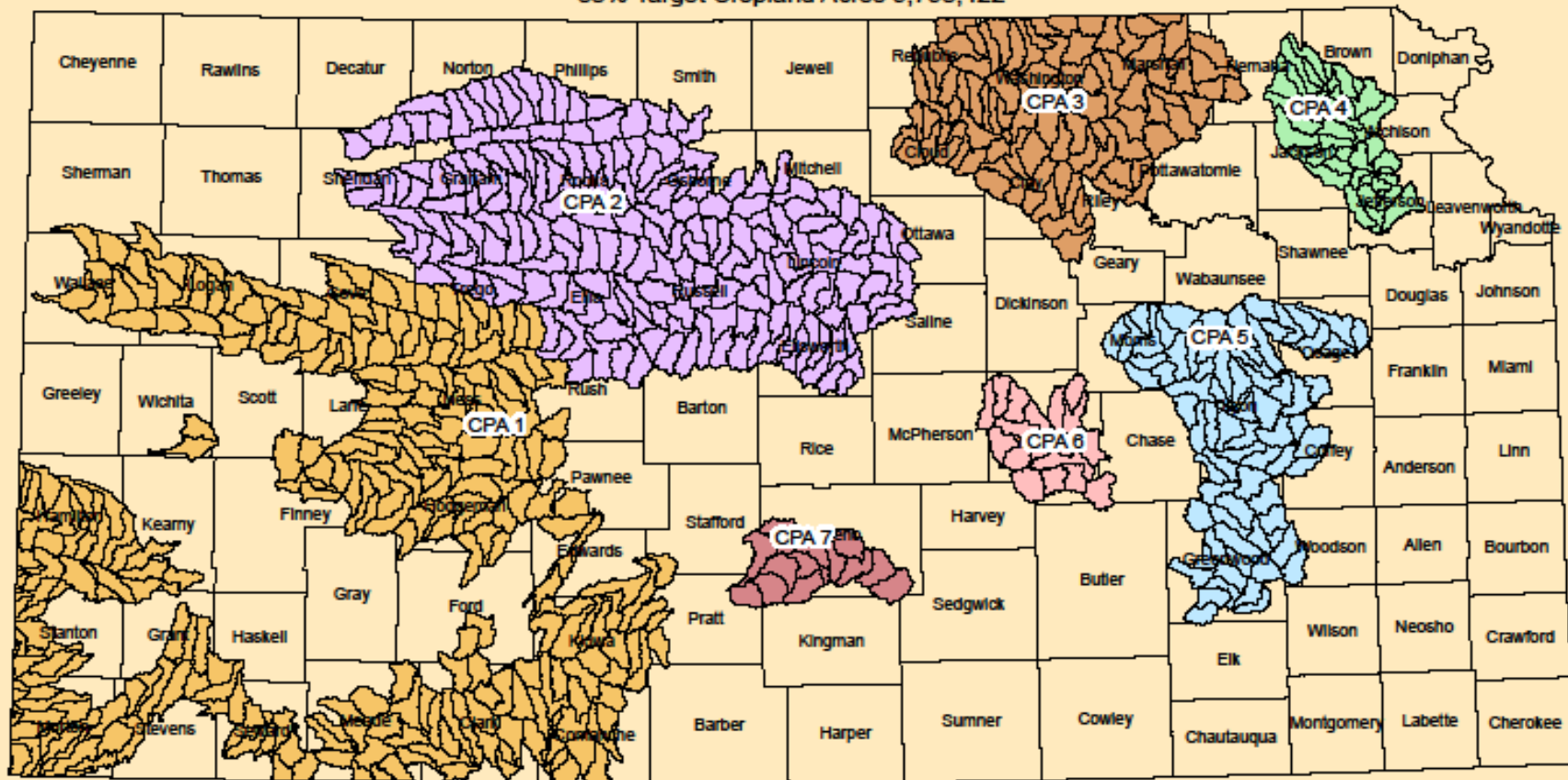
- General Enrollment (CRP Signups)
 - Conservation Priority Areas or CPA's
 - States designate Resource Protection Areas
 - Kansas designated LEPC CPA in mid-90's
- Continuous Enrollment CCRP
 - SAFE Practices







2010 Kansas Conservation Priority Area (CPA)

Proposed by Kansas Farm Service Agency

Total State Cropland Acres 29,374,391
33% Target Cropland Acres 9,793,422



Proposed CPA's

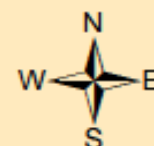
	CPA-1 Lesser_Prairie_Chicken	4,307,776.12
	CPA-2 Smoky_Hill	2,698,591.64
	CPA-3 Tuttle_Creek_&_Milford	1,349,824.39
	CPA-4 Perry	327,587.02

Acres

Proposed CPA's

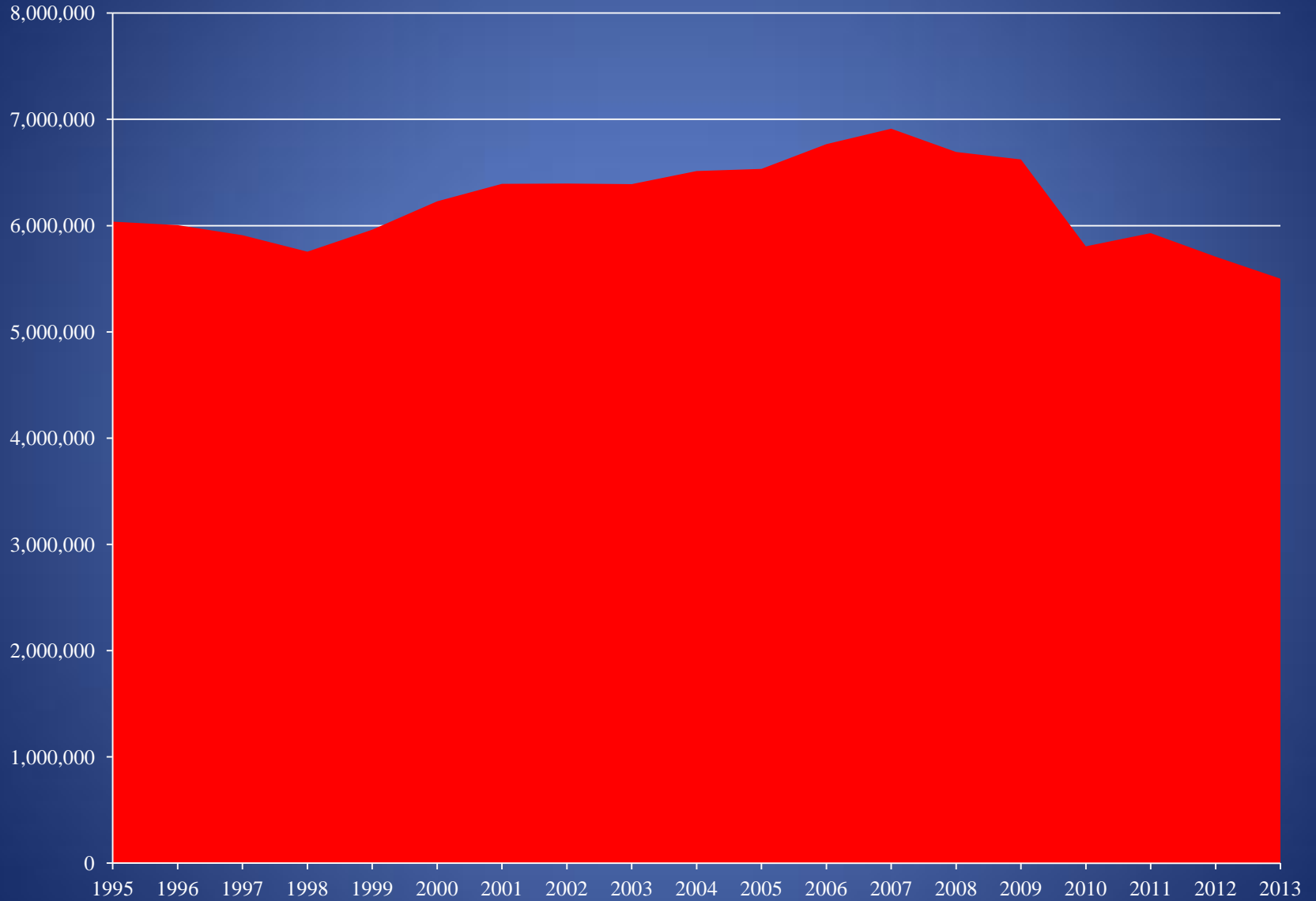
	CPA-5 Flint_Hills_Reservoirs	515,312.46
	CPA-6 Marion	286,357.88
	CPA-7 Cheney	307,865.41
	Remaining Available Acres	107.28

Acres

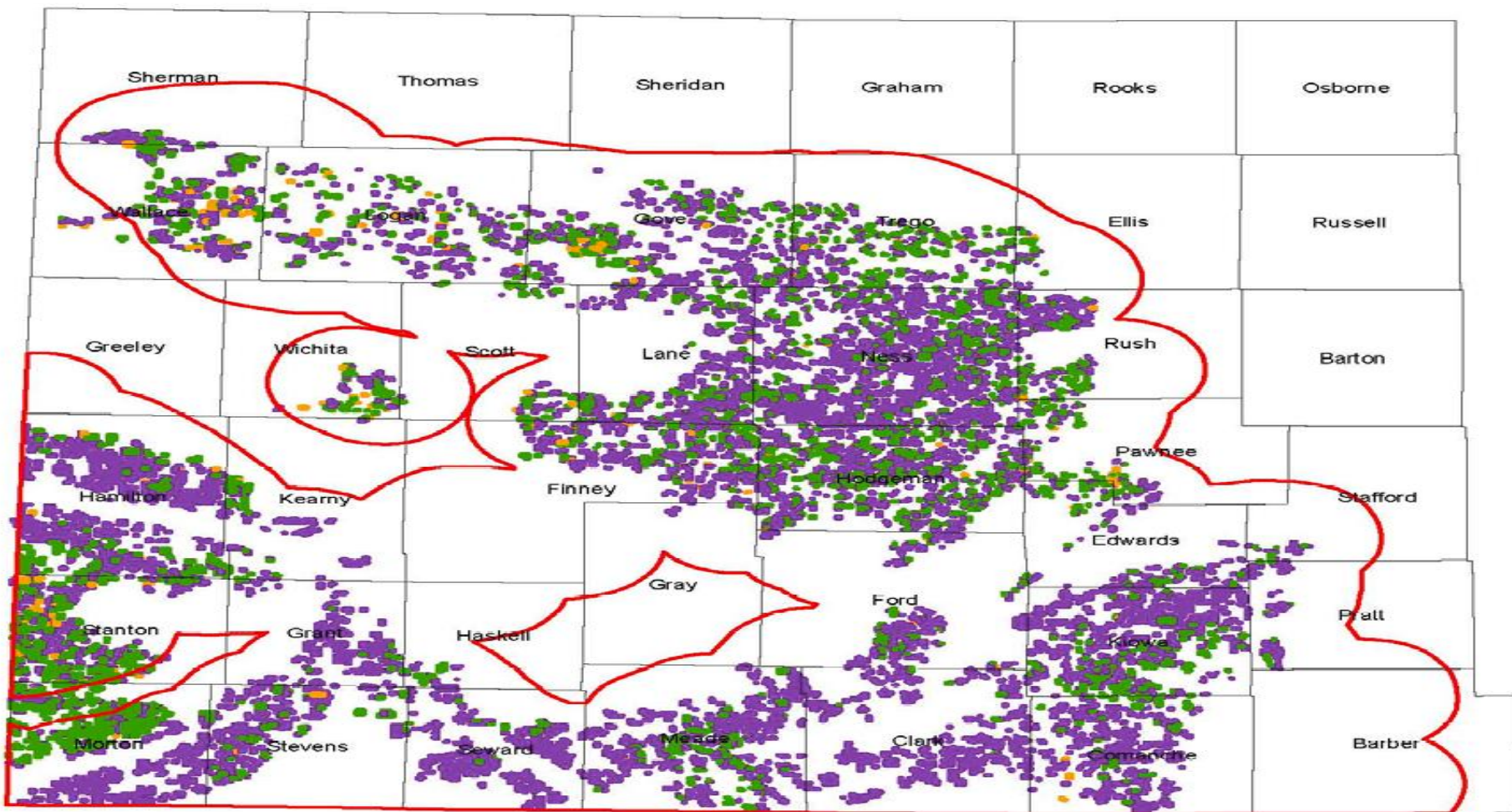


March 09, 2010

Figure 1: CRP Acres Enrolled over Time in LEPC Region



Kansas CRP Status in LPC Range



LandUse	Acres	Percentage of Landuse for Expired CRP
Enrolled in CRP in 2010	803,417.7	
Expired in Cropland	27,910.2	9.8%
Expired in Grass	258,288.5	90.2%
Total Expired Acres	286,198.6	100.0%

- Lesser Prairie Chicken Initiative Action Area
- Existing CRP
- Expired CRP in Grass
- Expired CRP in Cropland

Conservation Reserve Program

Kansas SAFE – LEPC Practice -

- Establishment & Protection of LEPC habitat
- Effective 12/1/2010 – 30,000 acres
- 10-15 yr. contracts within LEPC Target Area
- Incentive Payments – SIP & PIP
- Initial allocation exhausted – 7/30/2012
- Additional 22,100 acres available



Conservation Reserve Program

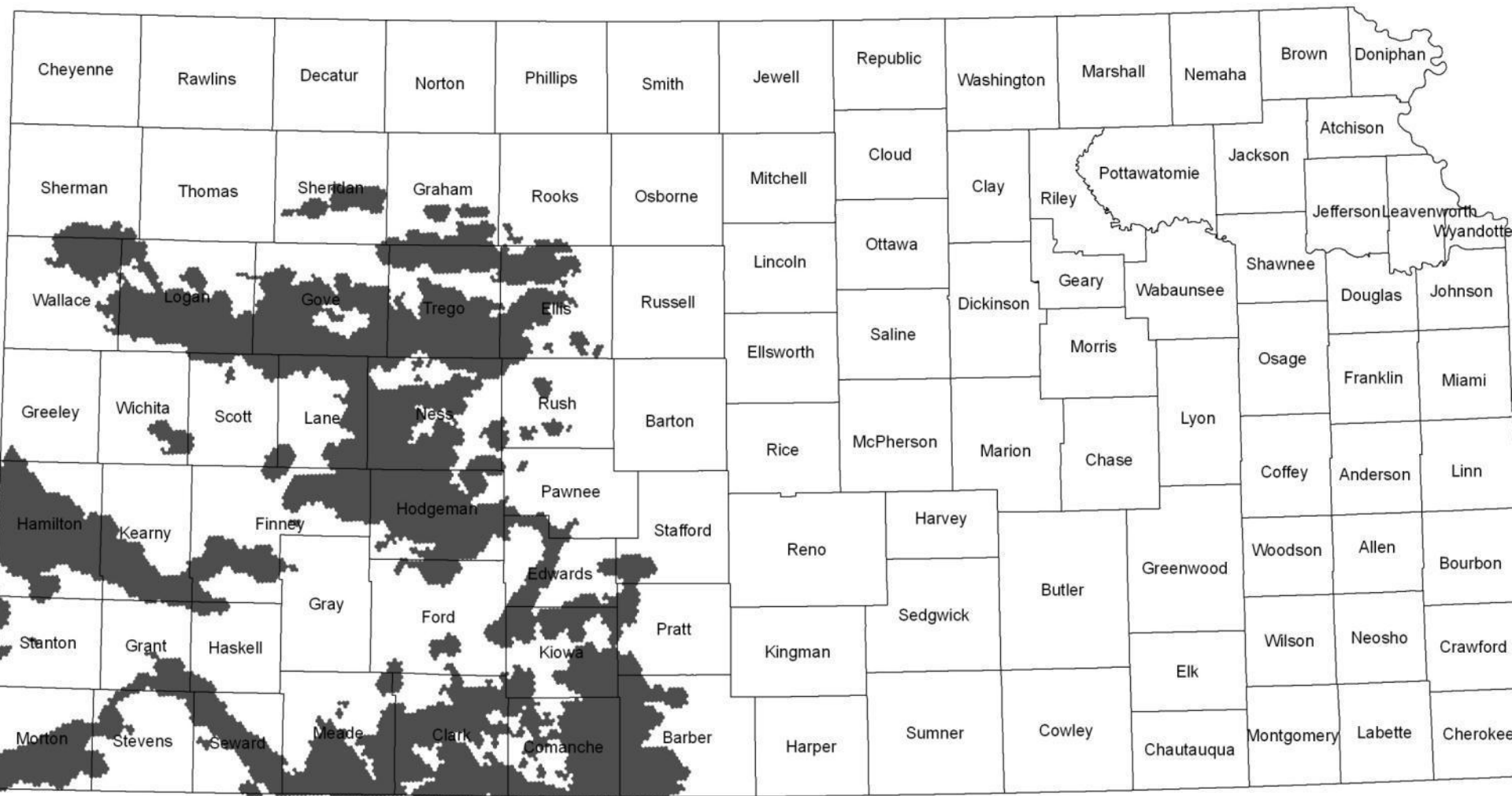
Range Wide SAFE Status –



State	Acres Allocated	Acres Enrolled
Colorado	21,500	13,487
Kansas	52,100	29,880
New Mexico	2,600	2,600
Oklahoma	15,100	6,668
Texas	122,700	77,664
Total	214,000	116,825

Kansas CP38E SAFE Lesser Prairie Chicken

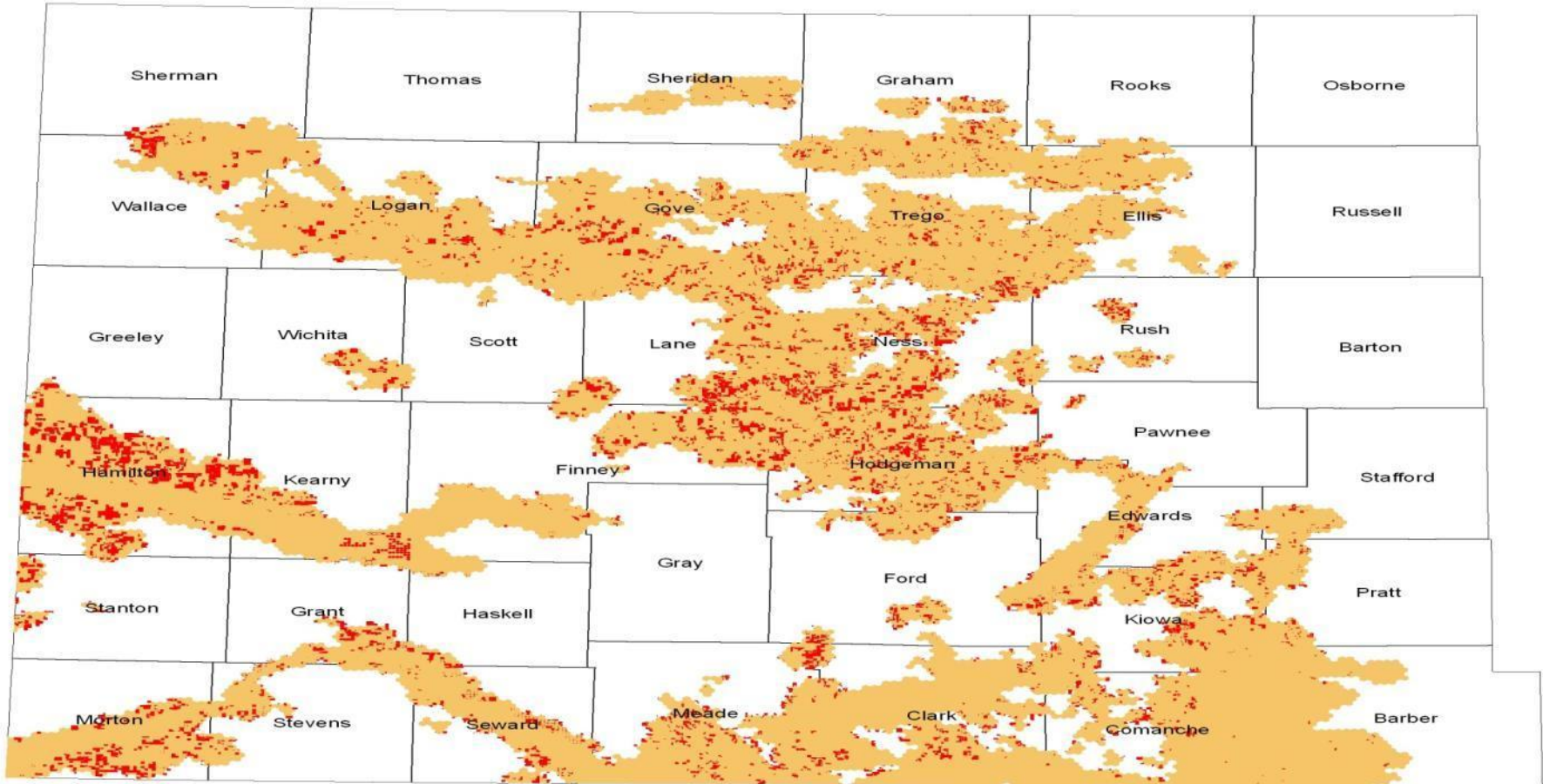
Target Areas as of 10/9/2012



□ County Boundaries
■ Lesser Prairie Chicken Target Areas



Kansas 2013 CRP in SAFE AREA



Total CRP Enrolled	2,346,888.20 acres
CRP Expiring 2013	211,641.96 acres
CRP in LPC	679,318.60 acres
CRP Expiring 2013 in LPC	50,651.98 acres

Existing CRP in LPC
 FY13_LEPC_SAFE

Conservation Reserve Program

CRP General Signup Period

- Signup Period – May 20 – June 14, 2013
- 212,000 acres expiring in Kansas
- 110,000 in Kansas LEPC counties
- 425,403 across entire LEPC range
- \$\$ Rental Rates adjusted upward
- Offers in LEPC CPA receive “Priority”
- Farm Bill expires 9/30/2013



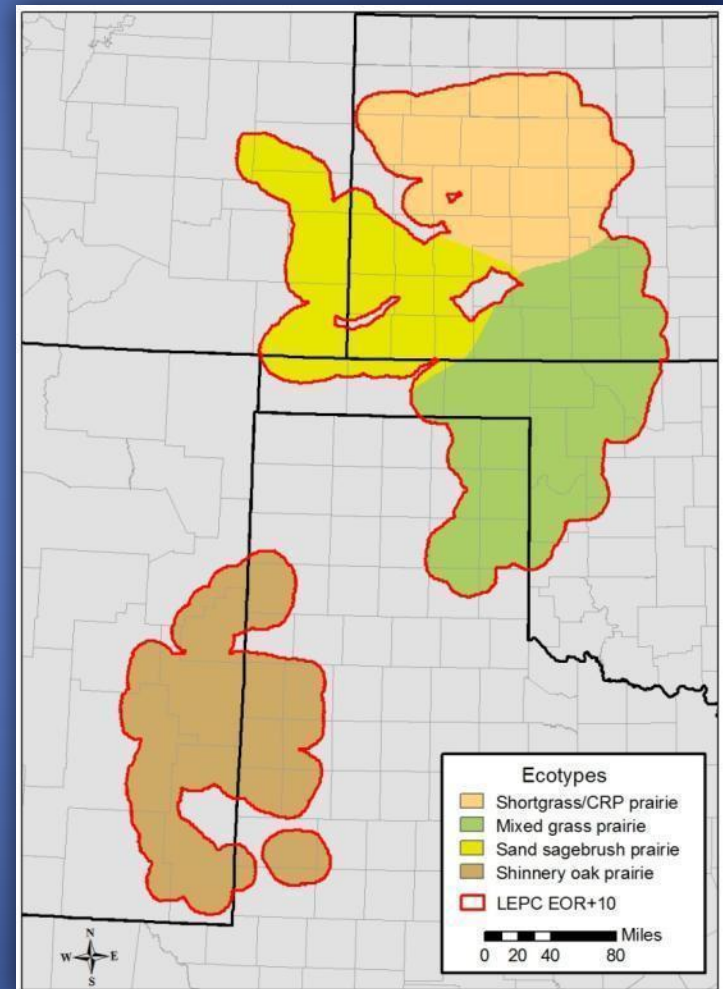
Proposed WAFWA Mitigation Framework



WAFWA Mitigation Framework

General Process

- 4 service areas in which impacted acreage will be offset with conservation actions
- WAFWA habitat quantification tool
 - works for all types of offset systems
- WAFWA administers program
- Success dependent upon voluntary participation from landowners and industry



WAFWA Habitat Unit Estimation

General Process

- Habitat Evaluation Guide (HEG)
 - Utilizes 4 consistent variables to quantify habitat value
 1. Absolute Vegetation Cover
 2. Vegetation Composition (preferred grasses & shrubs)
 3. Presence of Tall Woody Plants (i.e. cedar infestation)
 4. Availability of suitable habitat within 1 mi. radius from center of unit
- Only considers unimpacted acreage



Impact Buffers

Feature	Impact Buffer (feet)	Max. Acres Impacted (rounded)
Oil & Gas Pads	656	31
Turbines, Structures (>200 ft.), & Commercial Bldgs.	2,188	345
Transmission Lines (≥ 69 KV) (per mile)	1,312	318
Distribution lines (<69KV) & Private Roads (per mile)	33	8
Primary Roads (per mile)	2,188	398
Secondary Roads (per mile)	1,640	53
Residential Bldgs.	133	14

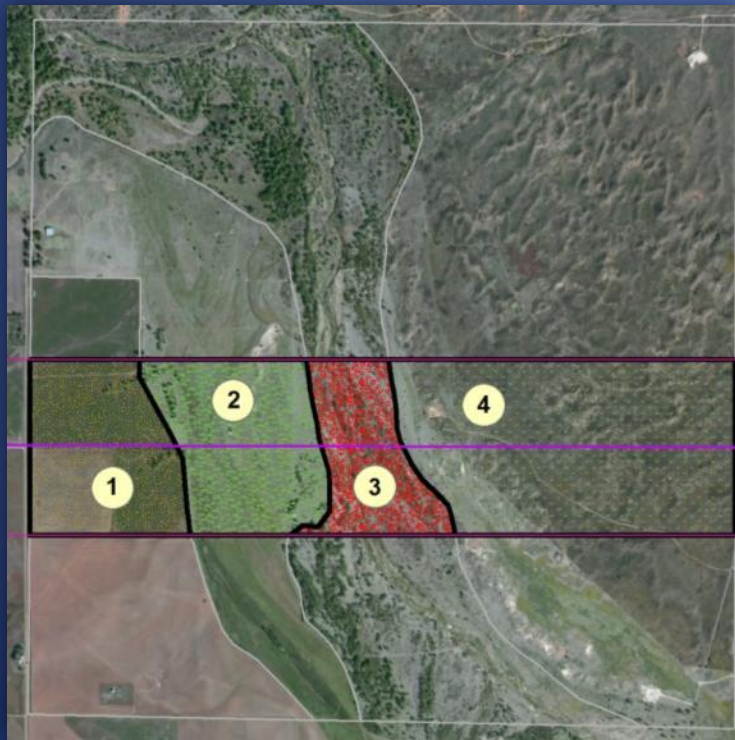


WAFWA Habitat Unit Estimation

Step 1: Delineating Evaluation Units

Similarly managed homogenous vegetation within area of interest

- further delineation of grassland if soil types differ within a management unit



New Transmission Line



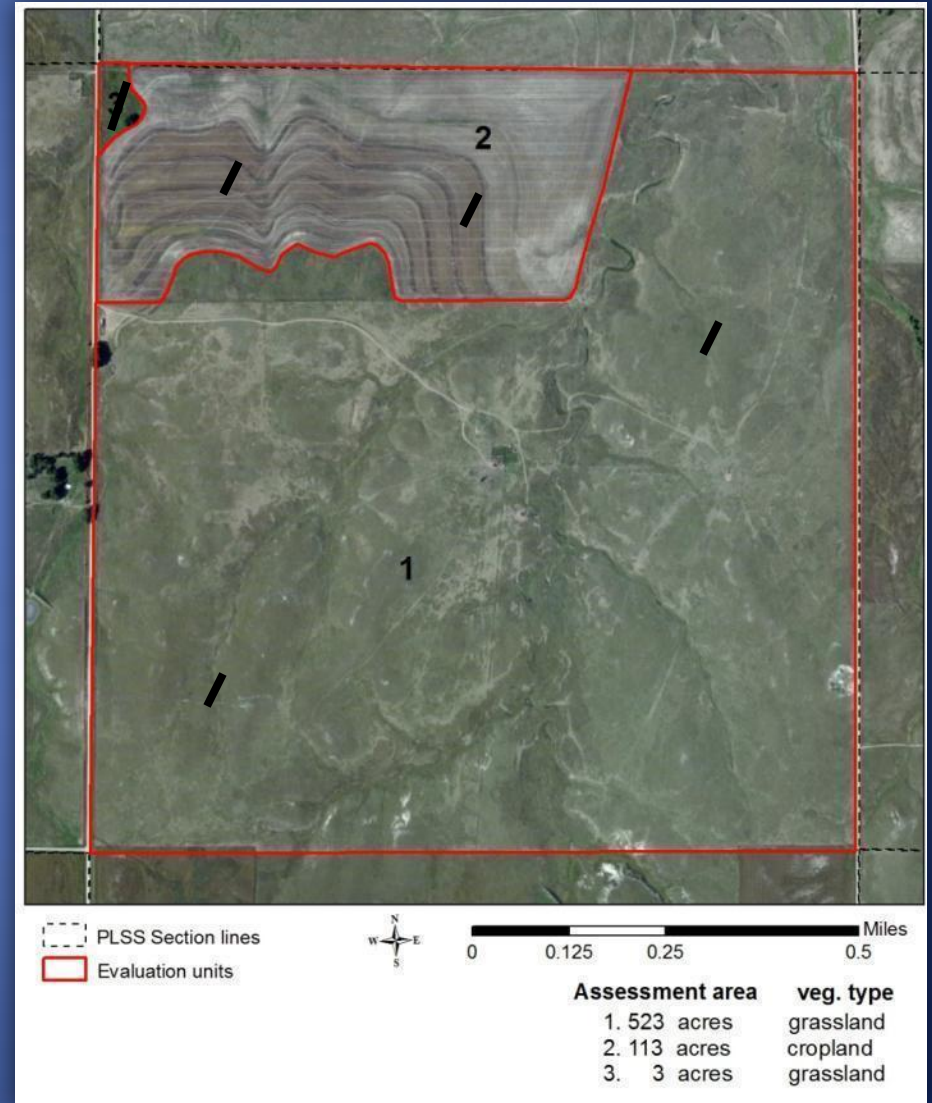
Entire Ranch

WAFWA Habitat Unit Estimation

Step 2: On-site vegetation Monitoring

1. Standard (NRCS protocol)
 - a) Two 150 ft. randomly placed and non-overlapping transects
 - b) Number of transects can be adjusted based on unit size
2. Additional effort to estimate tree cover

Unit	Total Cover (Q1)	Veg. Comp. (Q2)	Tree Cover (Q3)
1	30%	83%	0.05%
2	10%	0%	0%
3	45%	62%	0.8%



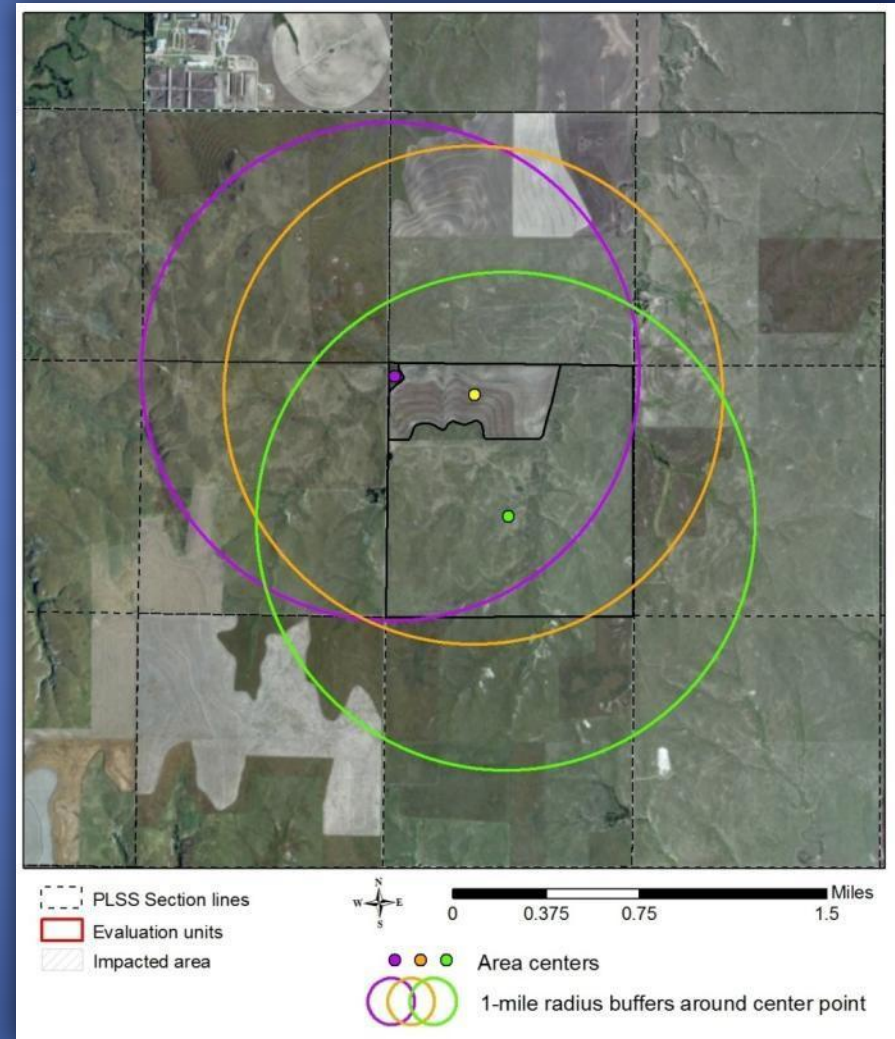
WAFWA Habitat Unit Estimation

Step 3: Broad scale evaluations

Proportion of area within 1 mi. radius of geometric center of unit classified as potentially usable by LEPC

- Defined as native prairie or planted native grasses with <1% tree cover
- Actions outside directly affected area will influence scoring

Unit	Total Cover (Q1)	Veg. Comp. (Q2)	Tree Cover (Q3)	Proportion Suitable (Q4)
1	30%	83%	0.05%	0.85
2	10%	0%	0%	0.80
3	45%	62%	0.8%	0.80



Habitat Unit Estimation

Step 4: Removing Impacted Acreage

Only affected acreage that is currently unimpacted considered in calculation

Unit	Total Cover (Q1)	Veg. Comp. (Q2)	Tree Cover (Q3)	Proportion Suitable (Q4)	Acres
1	30%	83%	0.05%	0.85	410
2	10%	0%	0%	0.80	108
3	45%	62%	0.8%	0.80	1



HEG Scoring Example

Unit 1 Calculation

1.	Vegetation Cover			
	a)	>45%	-	1.00
30%	b)	30-45%	-	0.85
	c)	15-30%	-	0.60
	d)	<15%	-	0.25
	e)	Agricultural field	-	0.05

2.	Vegetation Composition (preferred species)			
	a)	>75%	-	1.00
83%	b)	50-75%	-	0.85
	c)	25-50%	-	0.60
	d)	<25%	-	0.25
	e)	Agricultural field	-	0.05

3.	Presence of Woody Plants (>3ft height)			
	a)	None	-	1.00
0.05%	b)	<1%	-	0.85
	c)	1-5%	-	0.60
	d)	>5%	-	0.25
	e)	Agricultural field	-	0.05

4.	Availability of Desired Cover (1 mi. radius)			
	a)	>90%	-	1.00
85%	b)	80-90%	-	0.90
	c)	- j)	-	0.10 – 0.80
	d)	None	-	0.00

HEG Score = Min Score (Q's 1-3) X Q4 Score

• $0.85 \times 0.90 = \underline{\underline{0.765}}$

Habitat Units = Unimpacted Acreage X HEG Score

410 Acres X 0.765 = **313.65 units**

** 1 Unit = 1 acre of unimpacted high quality habitat as defined by the 4 HEG variables*

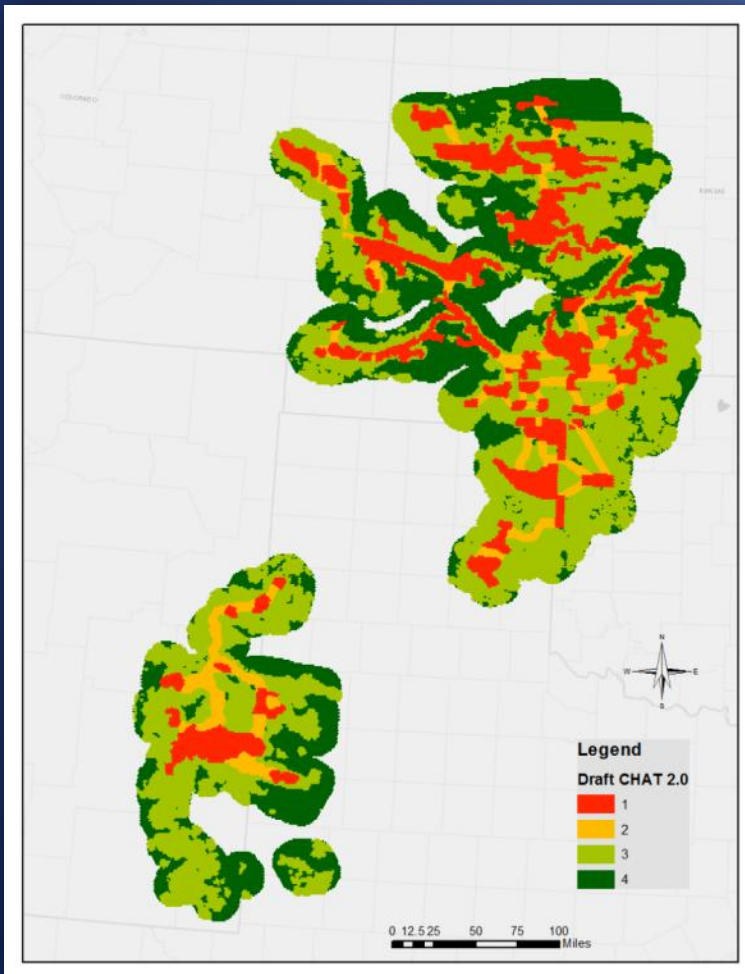
WAFWA Habitat Unit Estimation

Step 5: Tabulation of All Units

Evaluation Unit	Unimpacted Acres		HEG Score		Units
1 (Pasture)	410	X	0.765	=	313.65
2 (Ag field)	108	X	0.04	=	4.32
3 (Grass corner)	1	X	0.765	=	0.765
Total	519	NA	NA	NA	318.74

Monetary Valuation of Habitat Units

Crucial Habitat Assessment Tool (CHAT)



CHAT Category	Approximate Unit Costs <i>(range-wide avg.)</i>	Cost-Share Basis <i>(based on USDA rates)</i>
CHAT 1	\$59.52	120-150%
CHAT 2	\$49.60	105-125%
CHAT 3	\$39.68	100%
CHAT 4	\$29.76	75%
CHAT 5	\$0	0%

Values set by WAFWA Board of Directors following guidance from each of the 4 WAFWA advisory boards

Annual Management Replacement Cost

approximate range-wide avg. cost

Evaluation Unit	Unimpacted Acres		HEG Score		Units
1 (Pasture)	410	X	0.765	=	313.65
2 (Ag field)	108	X	0.04	=	4.32
3 (Grass corner)	1	X	0.765	=	0.765
Total	519	NA	NA	NA	318.74

318.74 Units X \$39.68 (CHAT 3) = **\$12,647.⁶⁰**

Estimating Impact Costs

1. Annual cost = Annual replacement + admin. fee (WAFWA = 15%)
2. Lifetime cost = annual cost x 20 years (duration)
 - Offsets impacts in perpetuity with endowment and annual crediting
3. Adjusted lifetime cost = lifetime cost x 2
 - 2:1 ratio needed to reach population and habitat goals



Maximum Development Costs

- Vary by ecoregion and development type
- Range from \$15K/mi. of distribution line in sand sagebrush to \$1.6M/mi. of primary road in mixed grass
- Scaled down by location (CHAT), quality (HEG), and existing impacted acres
 - No cost outside CHAT 1-4
 - No cost if HEG = 0
 - No cost if acreage already impacted



A wide-angle photograph of a vast field of tall, dry grasses, likely a prairie or steppe. The grasses are a mix of golden-brown and green, indicating some regrowth. The field extends to a flat horizon under a clear, bright blue sky. The text "Offset Allocations" is overlaid in the center in a large, white, sans-serif font.

Offset Allocations

Offset Allocation

contract options

1. Short Term (75%)

- a) Sign-up incentive
- b) 5 year contract
- c) 10 year contract

2. Long-Term (25%)

- a) Perpetual conservation easement
 - i. Annual payments for implementation of required mgmt. plan
 - ii. Available to properties in FA or CZ or by special authorization
 - iii. Preference for agreements with surface and mineral rights

Offset Allocation

Practices & Conservation Plans

1. Restoration practices (10 yr contract)
 - Brush management
 - Range planting
2. Standard Mgmt. Plans (required)
 - Rangeland conservation plan
 - Prescribed grazing & burning, LEPC-friendly fencing, chemical treatment of invasive vegetation, etc.
 - Planted grass conservation plan
 - Requires mgmt activities at appropriate frequencies which can include burning, disking, interseeding, etc.



Offset Allocation

Practice Specifications

USDA specifications

1. Rangeland prescribed fire, brush management, range planting, spot treatment of invasive plants, chemical treatment of mesquite, & fencing (NRCS)
2. Planted grass management practices (FSA)

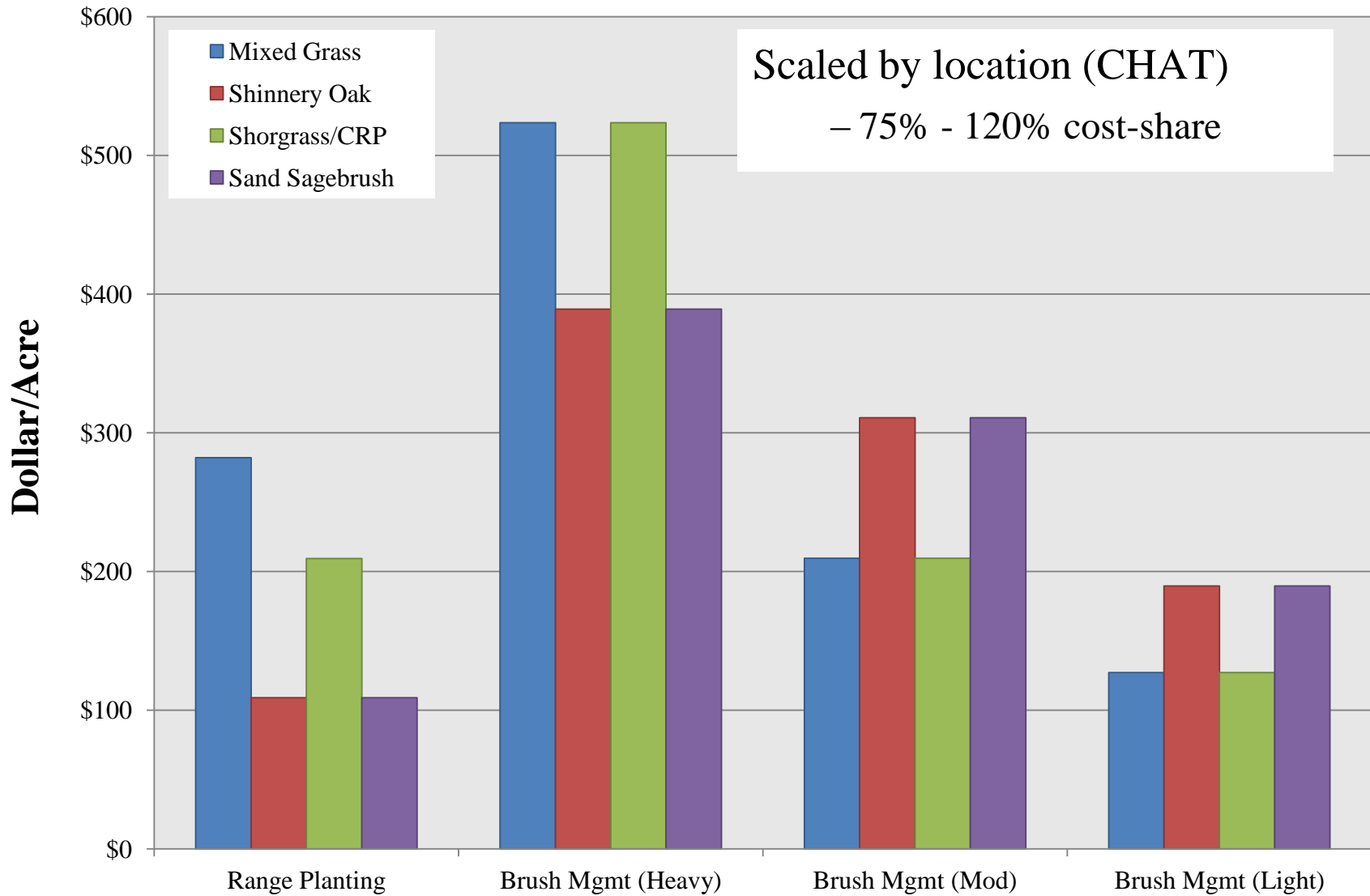
WAFWA specifications

1. Prescribed grazing
 - a) 33% utilization
2. Chemical treatment of shrubs
 - a) Only for reduction of shinnery oak cover

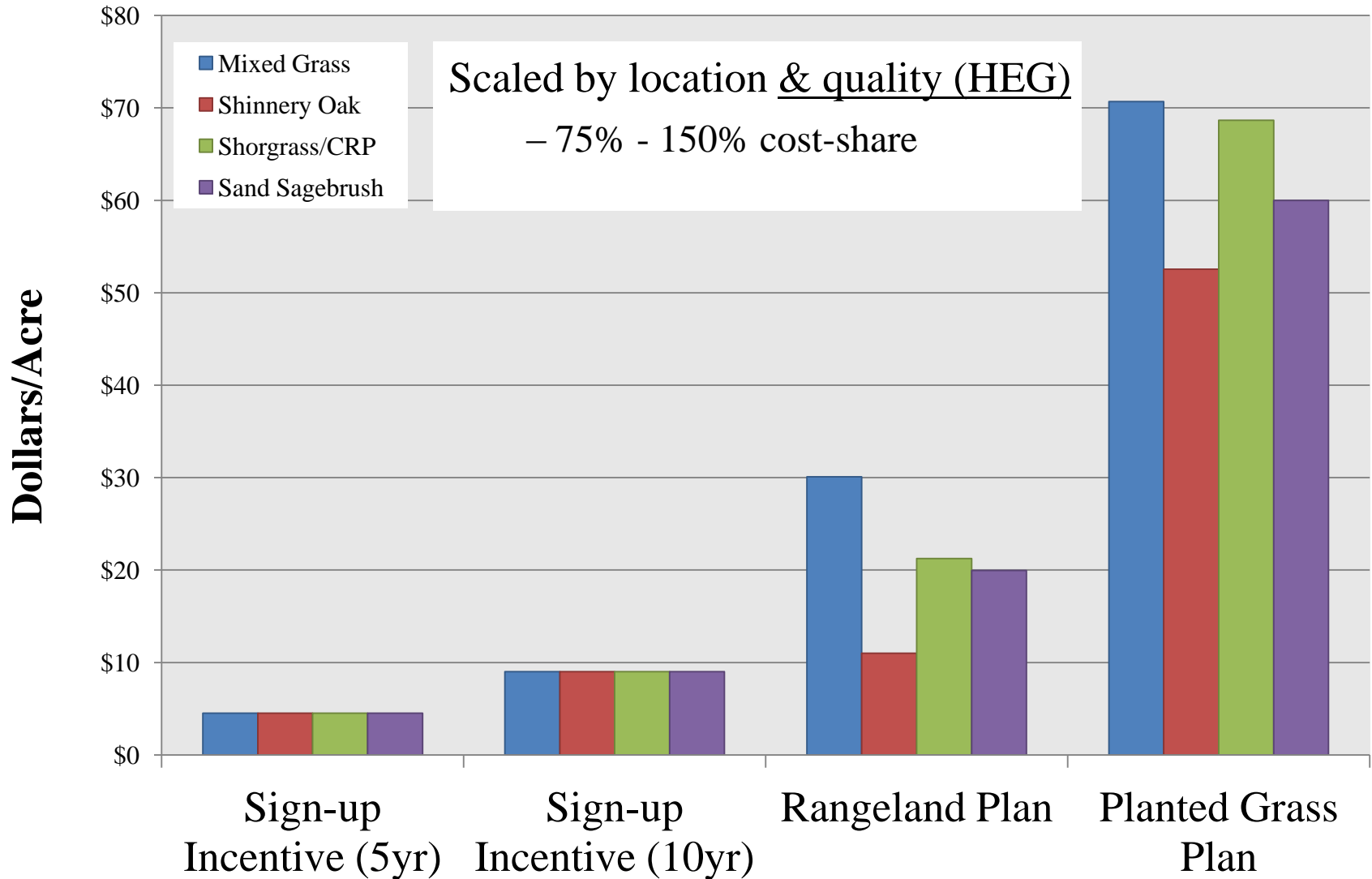
Specifications are flexible



Max. Rates for Restoration Practices in Short-Term Contracts



Max. Rates for Standard Practices in Short-Term Contracts



Long-Term Contracts

available in CHAT 1 & 2

- Max payment of 50% of appraised value for perpetual conservation easement
 - Negotiable based on existing conditions, site potential, easement terms, etc.
- Annual payments to cover implementation of required management plan in perpetuity



Offset Allocation

proposed payment schedule

1. Short-term

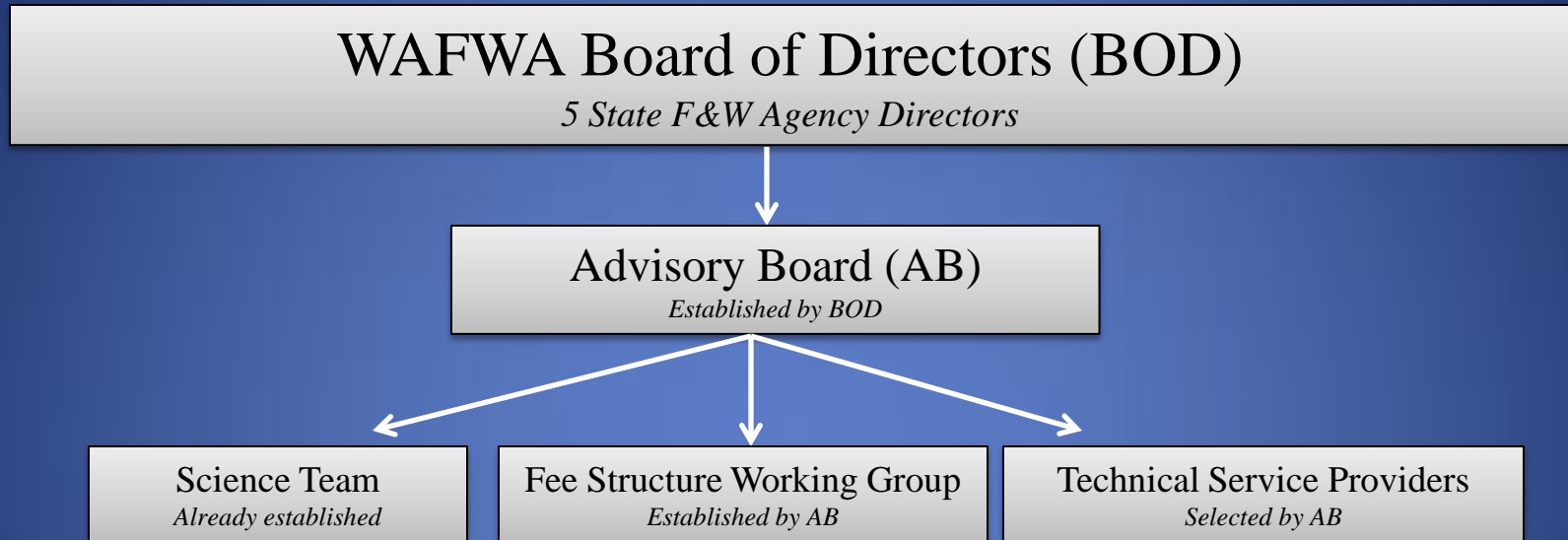
- a) Following a signed contract for sign-up incentives
- b) Following a site verification for restoration practices
- c) Annually in the fall for standard plan implementation
- d) Vegetation monitoring schedule established to track changes in habitat quality and adjust payments

2. Long-term

- a) Following a signed contract for conservation easement
- b) Annual management payment in the fall from endowment

WAFWA Mitigation Framework

Administrative Structure



Advisory Board

- Representation from conservation agencies, landowner groups, energy industry, biologists, municipalities, etc.
- Makes recommendations to BOD for providers, dispute resolutions, fees, & adaptive management activities
- Receives guidance and data from science team, fee structure working group, and technical service providers

Timeline

1. Comments accepted on LEPC plan through May 15

Jan Caulfield
114 S. Franklin St., Ste. 203
Juneau, AK 99801
janc@gci.net



Project Website:

http://www.wafwa.org/html/rangewide_lpc_conservation_plan.shtml

2. Additional comments on proposed rule?

- Final USFWS listing decision by Sept. 30, 2013
 - Possible 6 month extension



3. Mitigation framework enrollments starting in mid-summer

Additional Information

(not presented on webinar)

Habitat Focal Areas

- Support pop. goals
 - Targets for voluntary conservation
 - Priority areas for voluntary minimization and/or avoidance of development
- Selection followed guidelines
 - Support 75% of population goal
 - >70% good habitat when fully implemented
 - Separation <20 miles

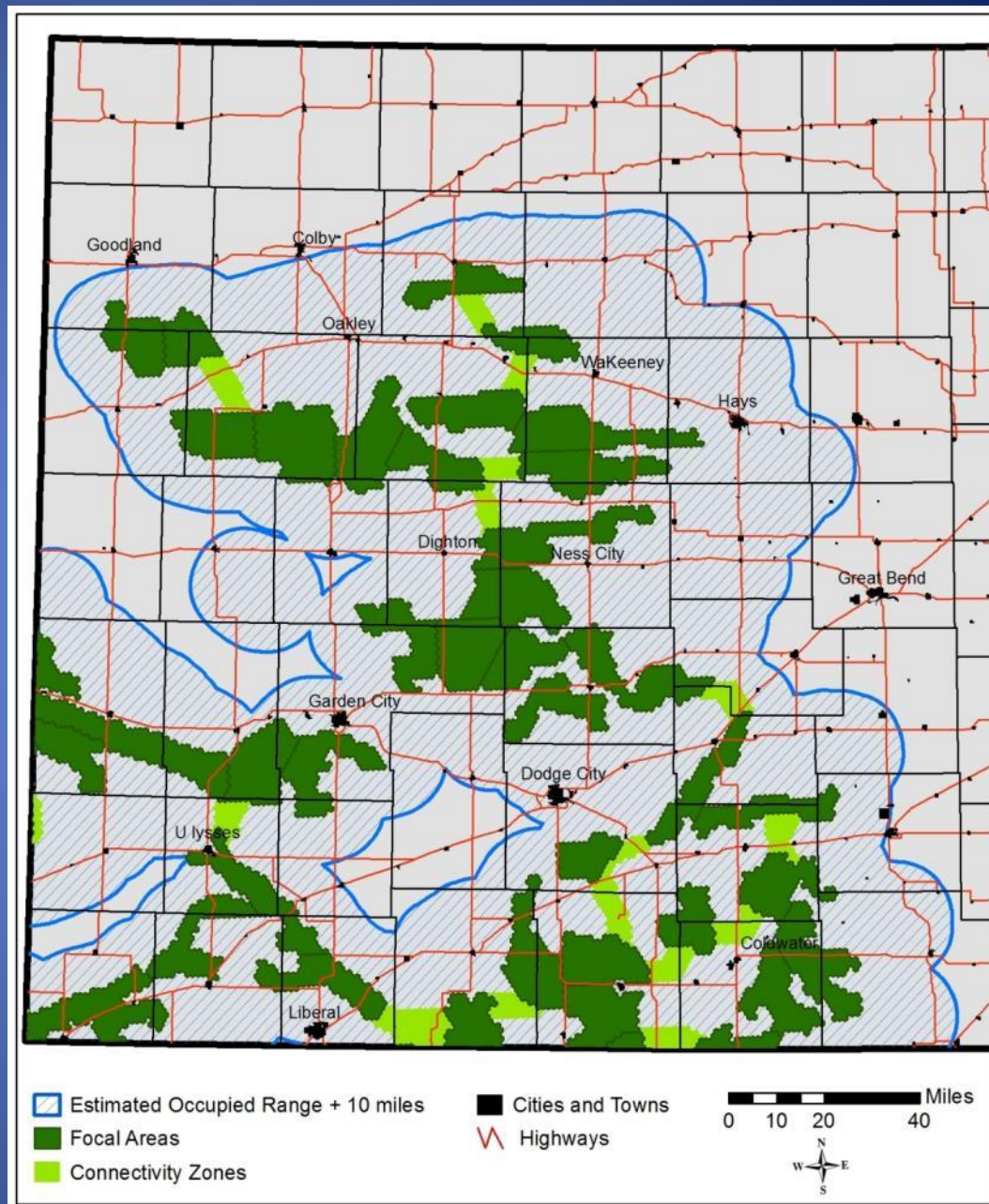
Connectivity Zones

- Connectivity between focal areas
- Secondary priority to focal areas
- Selection guidelines
 - Max. length of 20 mi.
 - Min. width of 5 mi.
 - >40% suitable habitat when fully implemented

KS Focal Areas & Connectivity Zones

Category	Kansas Acreage
Focal Areas	3,907,840
Connectivity Zones	532,480
Total	4,440,320

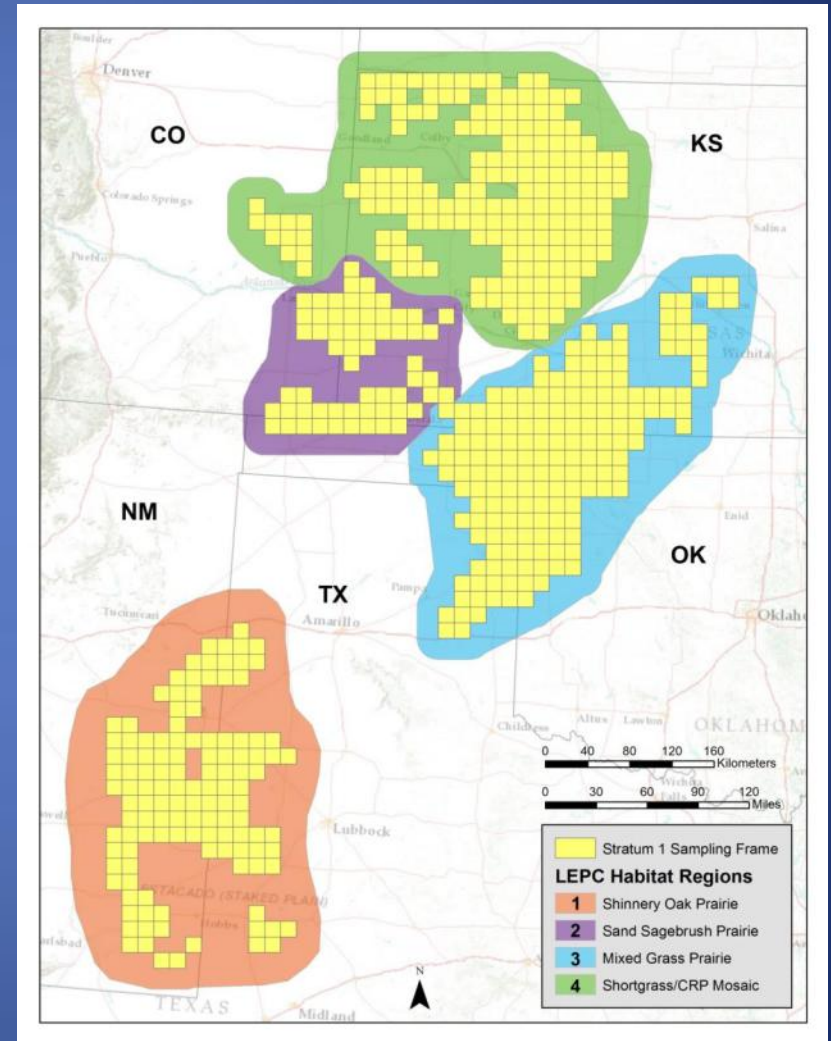
- 26% of KS LEPC range (+10 mi. buffer)
- 47% of range-wide priority acreage delineation



2012 Aerial Survey Results

Year	Population Estimates
Shinnery Oak Prairie	3,699
Sand Sagebrush Prairie	1,299
Mixed Grass Prairie	8,444
Shortgrass/CRP	23,728
Range-wide	37,170

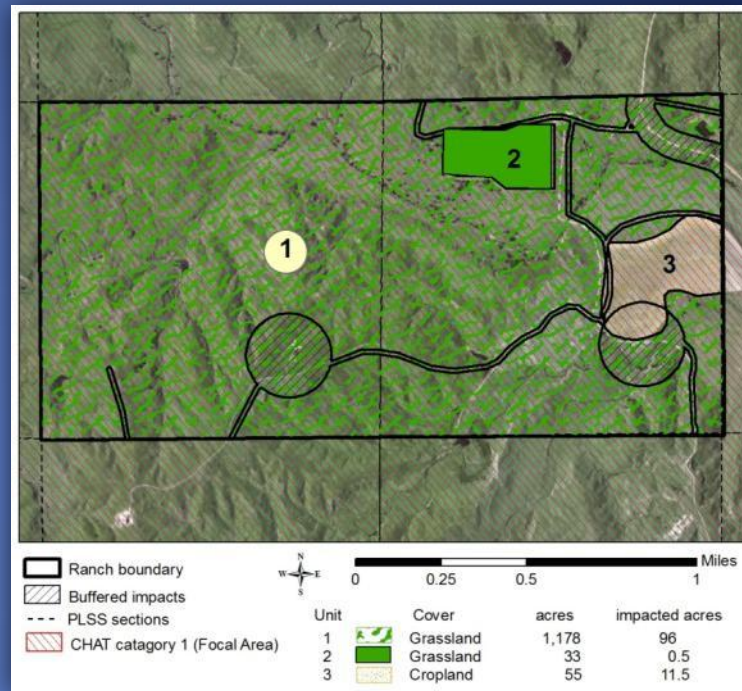
Roughly 25,000 – 30,000 birds in KS



Short-Term Contract Example

using approximate figures for shortgrass/CRP ecoregion

- 1,280 acre property in **focal area (CHAT 1)**
- 10-year contract
- Following practices:
 1. Brush management in Unit 1 on 5 acres
 - a) <1% cover
 2. WAFWA prescribed grazing in Unit 1
 3. Range planting in Unit 2
 4. Unit 3 not enrolled in plan



Unit	Contracted Acres	HEG Score (10-yr range)	Sign-up Incentives	Restoration Payments	Year 1	Year 2-4	Year 4-5	Year 6-10
1	1,082	0.6 – 0.80	\$5,842.80	\$635	\$37,294	\$39,958	\$39,958	\$42,847
2	32.5	0.05 – 0.9	\$14.96	\$6,093.75	\$1,316	\$1,755	\$1,755	\$1,978
3	0	NA	\$0	\$0	\$0	\$0	\$0	\$0
Total	1,114.5	NA	\$5,857.76	\$6,728.75	\$38,610	\$41,713	\$41,713	\$44,825

Proposed Vegetation Monitoring Schedule

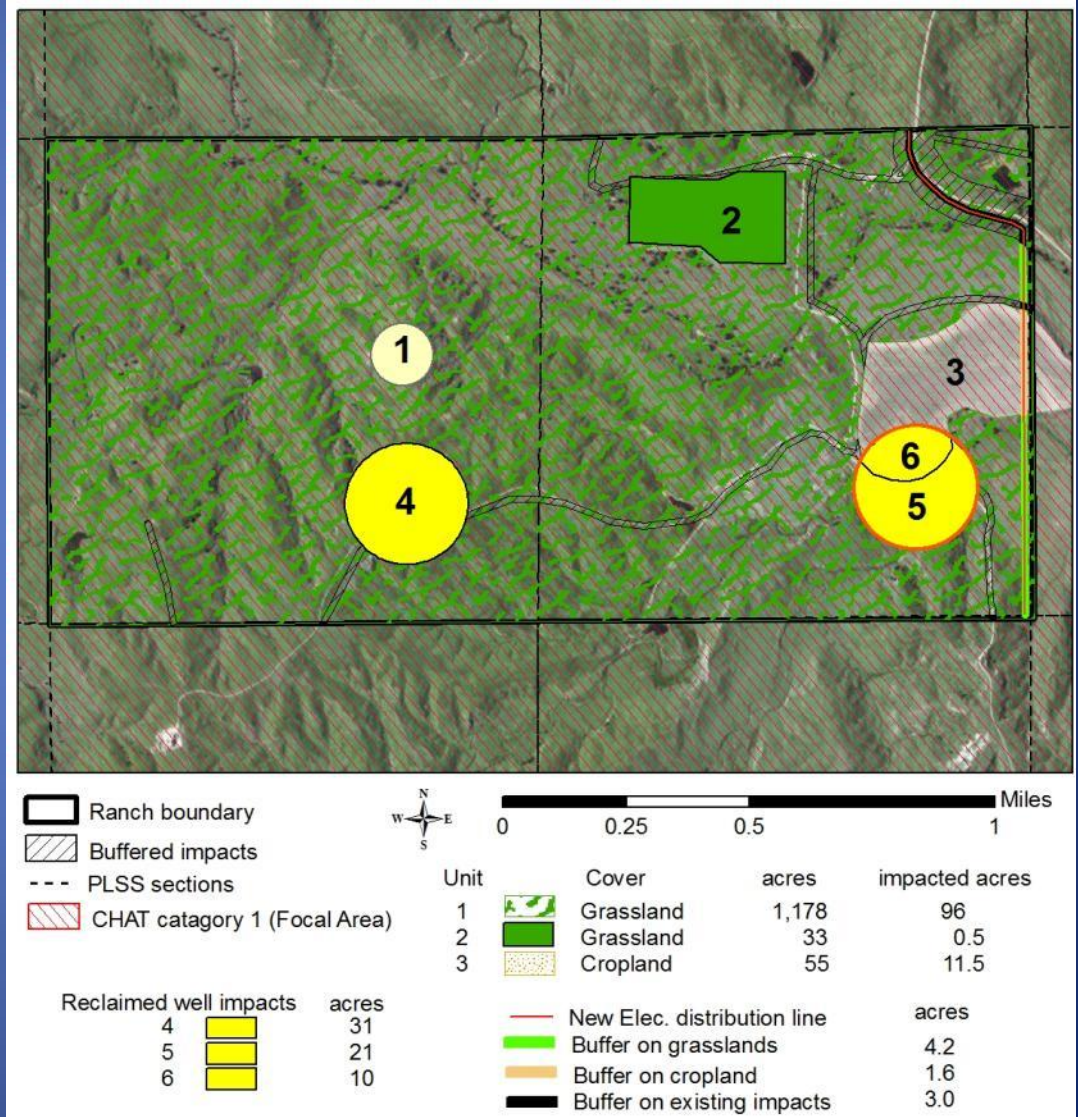
1. Will occur at time of enrollment and during the growing season (April 15 – July 15)
 - a) Annually for least the first 3 years following restoration
 - b) Every 3 years for all other enrollments
2. More frequent if there is reason to believe changes to habitat quantity and quality have occurred
3. Monitoring transect locations will be fixed and growing season monitoring will occur within 10 calendar days of all previous efforts (NRCS standard)

Final monitoring schedule to be set by WAFWA Board of Directors with guidance from advisory board

Other Ways to Generate Credits

Restoration of impacted acreage

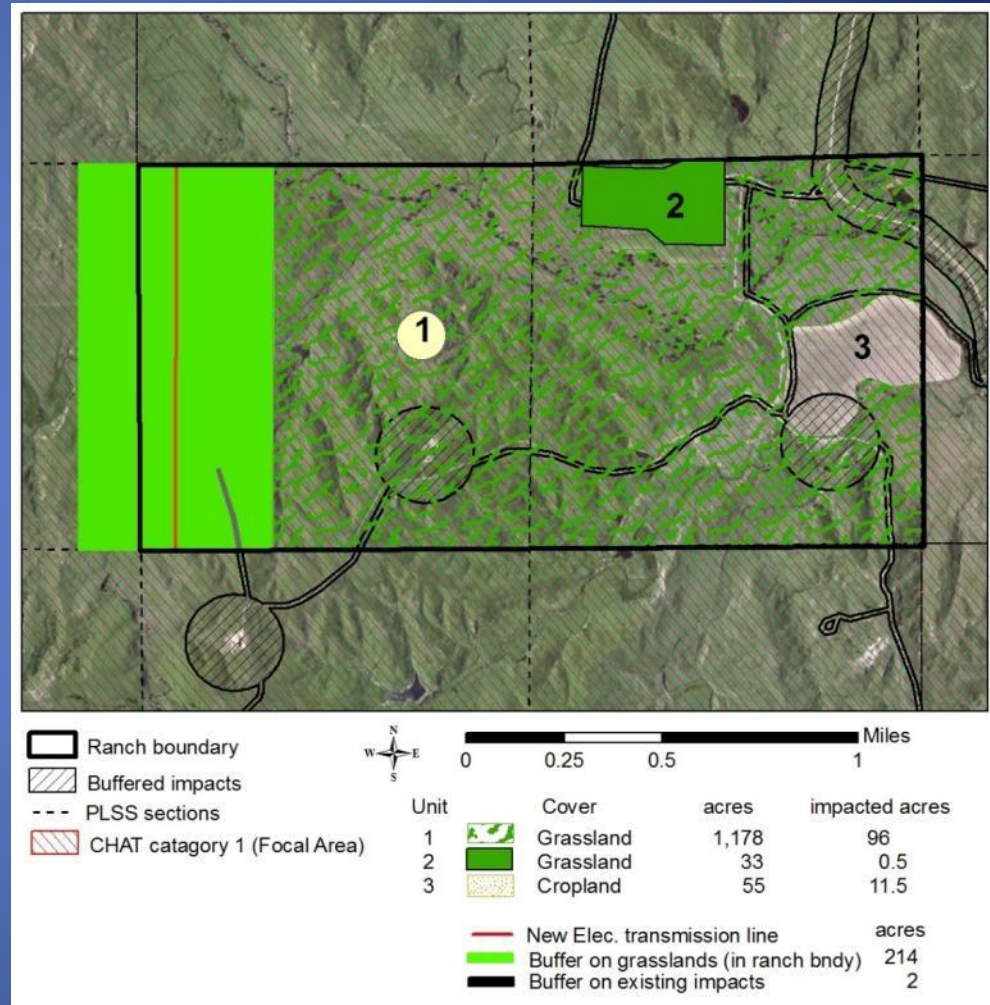
- a) Credits can be generated by whomever controls mineral rights
- b) Must be done under an approved plan and restoration using WAFWA specifications



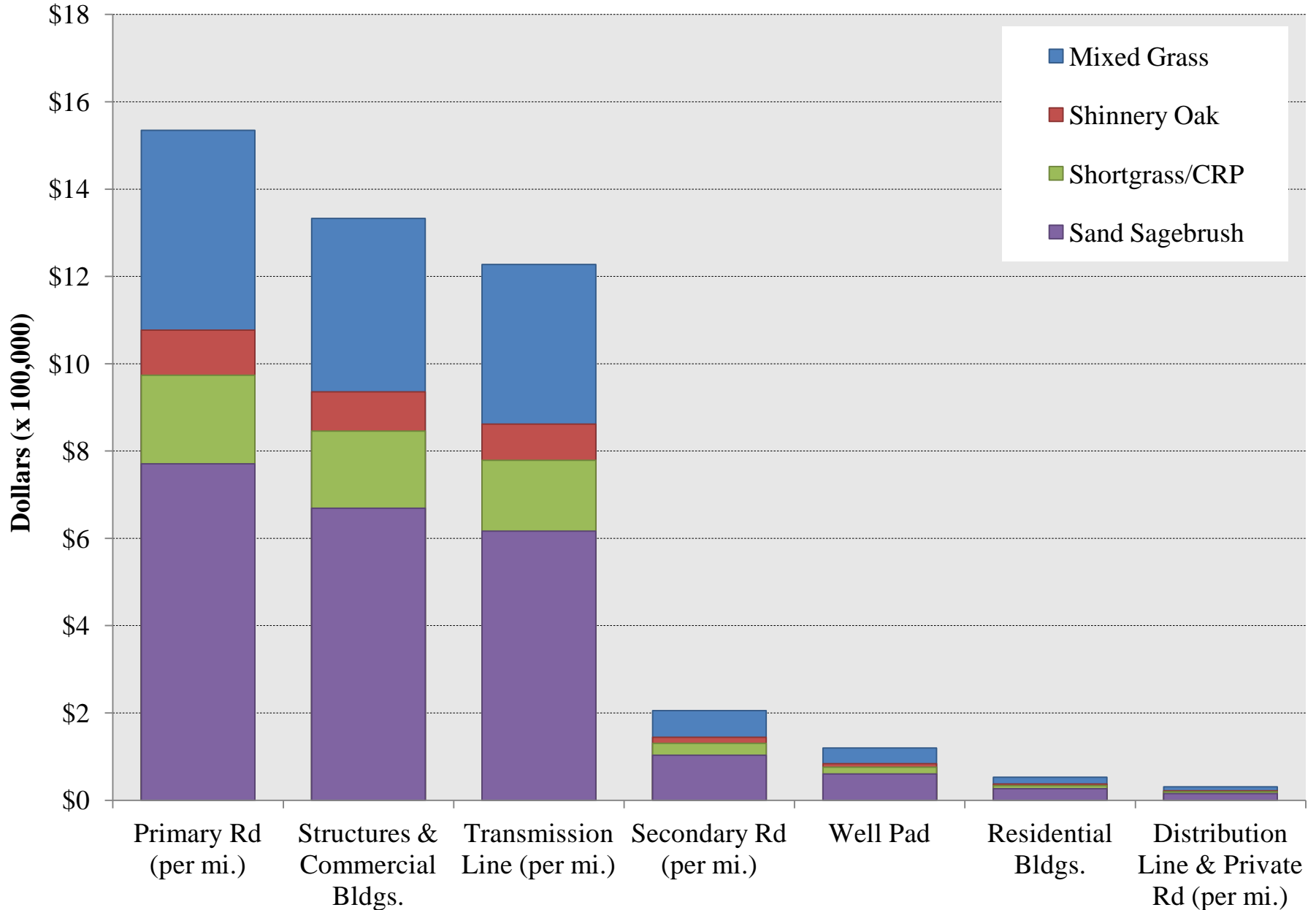
Conflict & Proposed Resolution

Transmission line gets built with eminent domain across an enrolled property

- a) WAFWA payments to landowner would be reduced due to loss of usable LEPC acreage
- b) Participating developers would reimburse landowners for lost income for the remainder of the landowner's contract

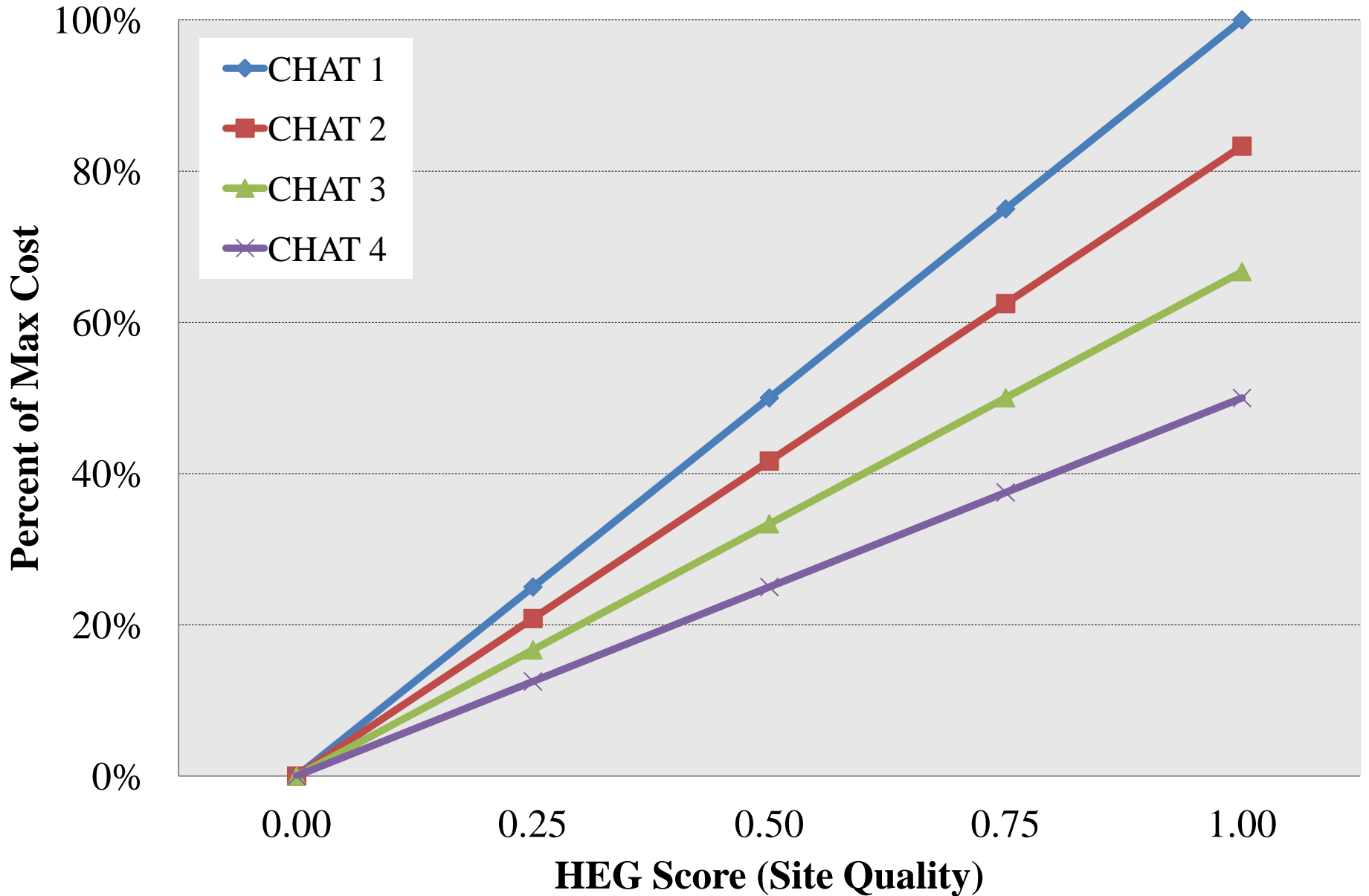


Potential Maximum Development Costs

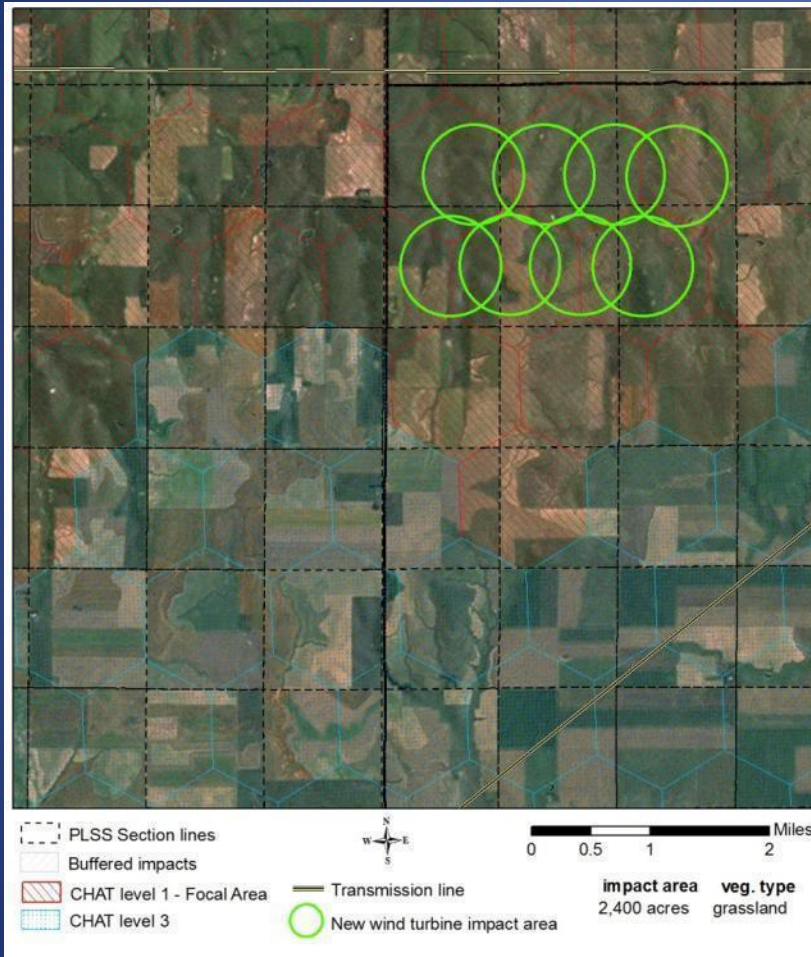


Scaling of Development Costs

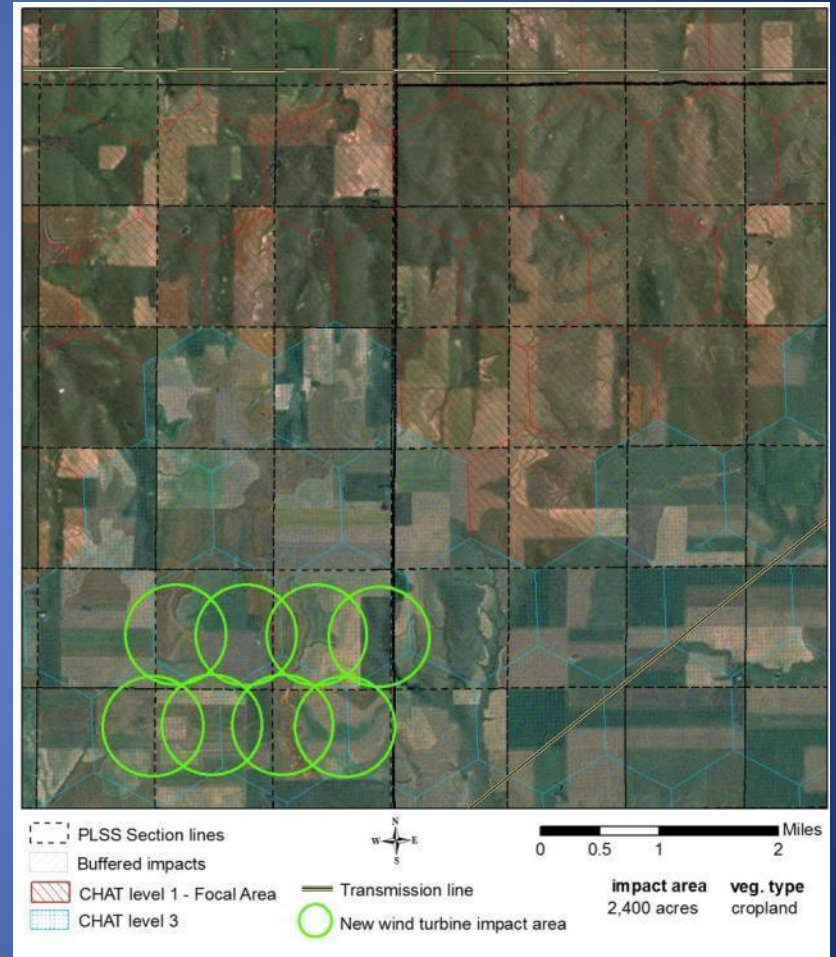
By location and site quality



Siting Greatly Influences Impacts (Costs)



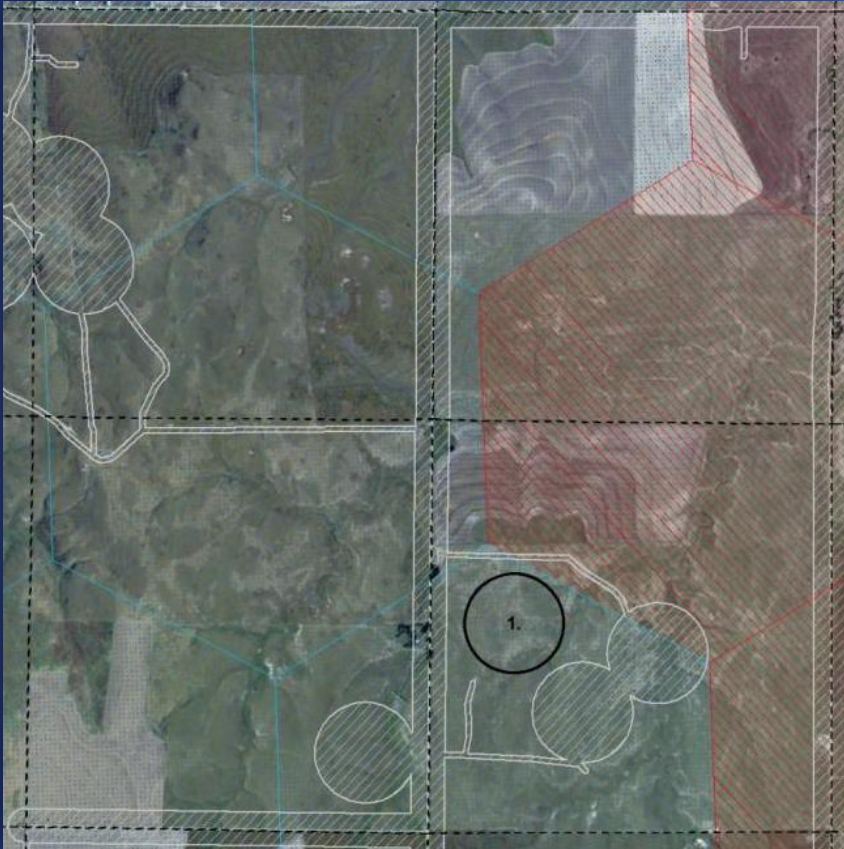
- 8 turbine array in grass all in CHAT 1
- a) up to 2,400 units impacted
 - b) highest cost per unit



- 8 turbine array in cropland all in CHAT 3
- a) up to 120 units impacted
 - b) units priced at half the cost of those in CHAT 1

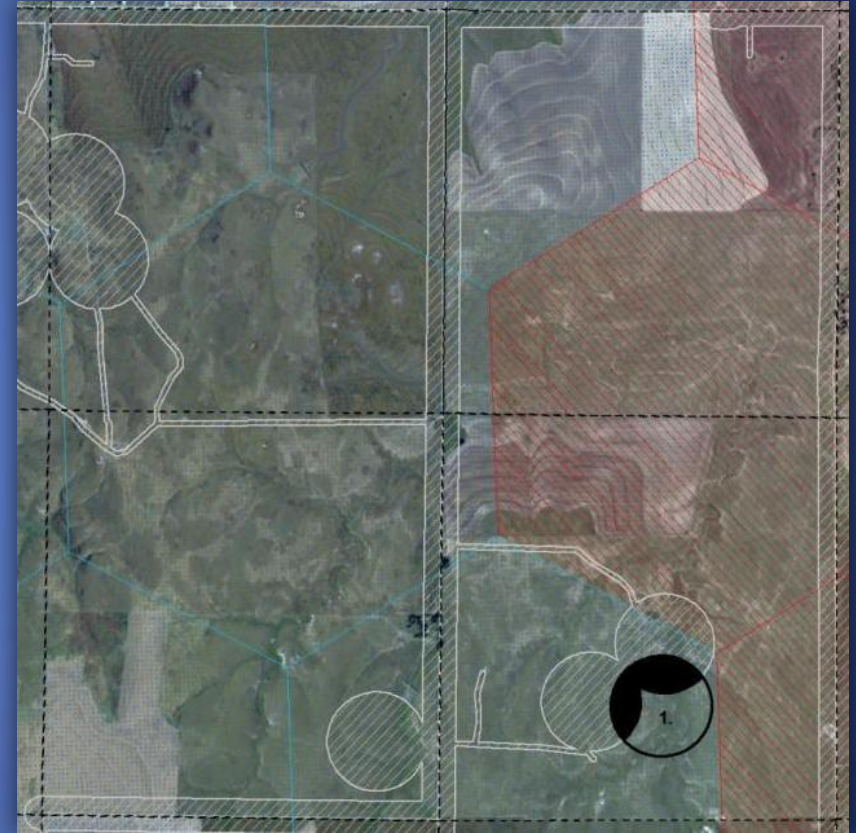
Clustering Developments

another way to reduce costs



31 acres of new impact

vs.



17 acres of new impact

Annual WAFWA Reporting

1. Aerial survey report summarized for entire LEPC range and ecoregion (produced in mid-late summer)
 - a) Breeding LEPC population estimates

2. Affected acreage report summarized by focal area, connectivity zone, and ecoregion (produced in late fall)
 - a) All managed acreage contracted by WAFWA and plan cooperators
 - b) HEG scores from WAFWA contracted sites
 - c) Land cover composition
 - d) Impacted acreage
 - e) WAFWA veg. data summarized by conservation practice (every 5th year)

Reports will be publicly available and provided to all plan cooperators

Adaptive Management Process

(Guided by progress towards population and habitat goals)

Annual adaptations

- Allocation of credits to most needed locations and practices (WAFWA advisory board)
- Unit values (WAFWA advisory board)
- Improved targeting for partner conservation programs (All Plan Cooperators)

Potential annual adaptations

- Impact buffer distances for future enrollments (LEPC Science Committee)

Potential adaptations at 5-year review

- Reallocation of offset dollars to other ecoregions to improve progress toward goals
- Shifting of priority areas
- Changes to WAFWA conservation practice specifications

All recommendations must be approved by WAFWA Board of Directors