

RANGE-WIDE CONSERVATION PLAN FOR LESSER PRAIRIE-CHICKEN

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Listing Process Background and Timeline

1995
LPC Petitioned



1998
LPC Candidate



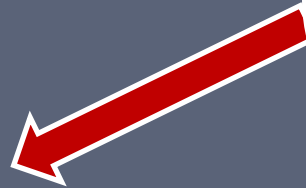
December 2012
Proposed Rule



September 2013
Final Rule

Range-Wide
Management
Plan-
March 31, 2013

Public
Comment
and Review
Period



Plan Objectives

- ▣ Develop a conservation strategy for LEPC
 - Range-wide population and habitat goals
 - Use core area approach to focus efforts (focal areas)
 - Cooperative efforts for LEPC habitat conservation
 - Integrate agreements with landowners, industries, agencies, and organizations for mitigation
- ▣ Input from stakeholders

LEPC Habitat– Leks

- ▣ Low vegetation, often on ridges
- ▣ Focus of monitoring surveys
- ▣ Not considered a limiting factor



LEPC Habitat– Nesting

- ▣ Native grass and shrub cover (sand sagebrush, shinnery oak, tall warm season grasses >11-20”
- ▣ Native grass CRP fields
- ▣ Denser vegetation
- ▣ Residual herbaceous cover
- ▣ A primary habitat need

LEPC Habitat– Broods

- ▣ Good cover of herbaceous vegetation and shrubs but less than nesting
- ▣ Good abundance of forbs
- ▣ Open near the ground for movements of chicks
- ▣ Abundant insects
- ▣ Another key habitat need

LEPC Habitat– Fall/Winter

- ▣ Generally similar to nesting and brood habitat
- ▣ Grain fields may be used for foraging
- ▣ Needs met with nesting and brood habitat



Landscape Composition

- ▣ LEPC need large blocks of habitat
 - 25,000-50,000 acre areas
- ▣ Habitat should have some variability within it to provide optimal nesting, brood, and lekking conditions- at least 2/3 in good nesting habitat

LEPC Habitat Dynamic

- ▣ Habitat quality changes over time
- ▣ LEPC adapted to historical disturbance processes
 - Fire reduces grass and shrub densities for 1-3 years and increases forbs, providing good brood habitat
 - Grass and shrub response 3-7 years post fire provides optimum nesting
 - Older stands may become too dense, depending on location

Population Status

- ▣ Range-wide aerial monitoring in 2012 estimated approximately 37,000 birds
- ▣ Retrospective population analysis showed concerns primarily for the populations in the sand sagebrush ecoregion and the mixed grass ecoregion with stable or increasing populations in the sand shinnery oak ecoregion and short grass ecoregion

LEPC Threats

- ▣ Habitat conversion by agriculture
 - Solution- incentive programs to maintain native grass and shrub communities and to convert croplands back to native grasses
- ▣ Livestock grazing
 - Solution- provide technical and financial assistance for landowners to apply grazing practices that maintain high quality LEPC habitat
- ▣ Shrub Eradication
 - Solution- stop government payments for shrub eradication and by providing incentives to maintain habitat

Threats, continued

- ▣ Altered fire regimes and woody plant invasion
 - Increase public and landowner awareness of role of fire
 - Provide technical and financial assistance to use prescribed fire
 - Provide technical and financial assistance for mechanical control of woody plants
- ▣ Wind energy, energy transmission, and oil and gas development and production
 - Solution- Work with companies to avoid siting in critical areas, apply BMP's, and provide mitigation opportunities for unavoidable impacts

Threats continued

▣ Climate change

- Encourage restoration and maintenance of large blocks of high quality habitat through incentive programs
- Encourage development of connectivity zones to allow movements and population shifts

▣ Collision mortality

- Provide technical and financial assistance for removal or marking of fences and power lines where needed

Threats continued

- ▣ Habitat loss and fragmentation (cumulative effects of the above)
 - Provide technical and financial assistance to create large blocks of habitat of the appropriate number, size, and location to support sustainable populations
 - Provide technical and financial assistance to create connectivity zones with sufficient quality habitat to allow movement of birds
 - Work with industries to voluntarily avoid or minimize impacts to habitat blocks and connectivity zones

Conservation Strategy

- ▣ Concentrate conservation actions into key areas to provide the needed large blocks of habitat
 - Identify population and habitat goals
- ▣ Engage landowners in implementing LEPC habitat restoration, enhancement, and maintenance by providing voluntary incentive programs
- ▣ Engage industries to avoid and minimize impacts in key areas and help mitigate for unavoidable impacts through agreements

Plan Development

- ▣ Led by IWG members in each state
- ▣ IWG and state agencies working with USFWS, industry, and other partners on CCAA's, BMP's, HCP's, VOP's, and other programs
- ▣ Southern Great Plains Crucial Habitat Assessment Tool (CHAT) refinement by CHAT team
- ▣ EMRI coordinating plan development and writing

Science Team

- ▣ Set population, habitat, and focal area goals
- ▣ Recommend impact buffer distances
- ▣ Provide science supporting development of a mitigation metric system

Voluntary Offset/Mitigation Committee

- ▣ Provided recommendations on application of mitigation metric system

Credit Trading/Conservation Banking Work Group

- ▣ Provided recommendations on possible frameworks for delivery of offset programs

Implementation Teams

- ▣ Each state has a team
- ▣ Members include federal and state agencies, organizations, and landowner groups that can help deliver habitat improvement programs
- ▣ Coordinate programs within each state and map “focal areas”

Population Goals

- ▣ Goal of 67,000 birds
- ▣ Broken into 4 “ecoregions”
 - Sand shinnery oak- 8,000 (4,000-12,000)
 - Sand sagebrush- 10,000 (5,000-15,000)
 - Mixed grass 24,000 (12,000-36,000)
 - Short grass 25,000 (12,500-37,500)

Focal Areas

- ▣ Purpose of focal areas
 - Areas designated where conservation efforts will be concentrated
 - Needed to provide large blocks of habitat. Widespread “random acts of kindness” don’t produce needed habitat

Focal Area Characteristics

- ▣ Focal areas should average >50,000 ac in size, with 70% of each area in good to high quality habitat
- ▣ Minimum of 25,000 acres of good to high quality habitat
- ▣ Focal areas should be within 20 miles of another focal area
- ▣ Connected by “connectivity zones”

Expected LEPC Densities

▣ Densities

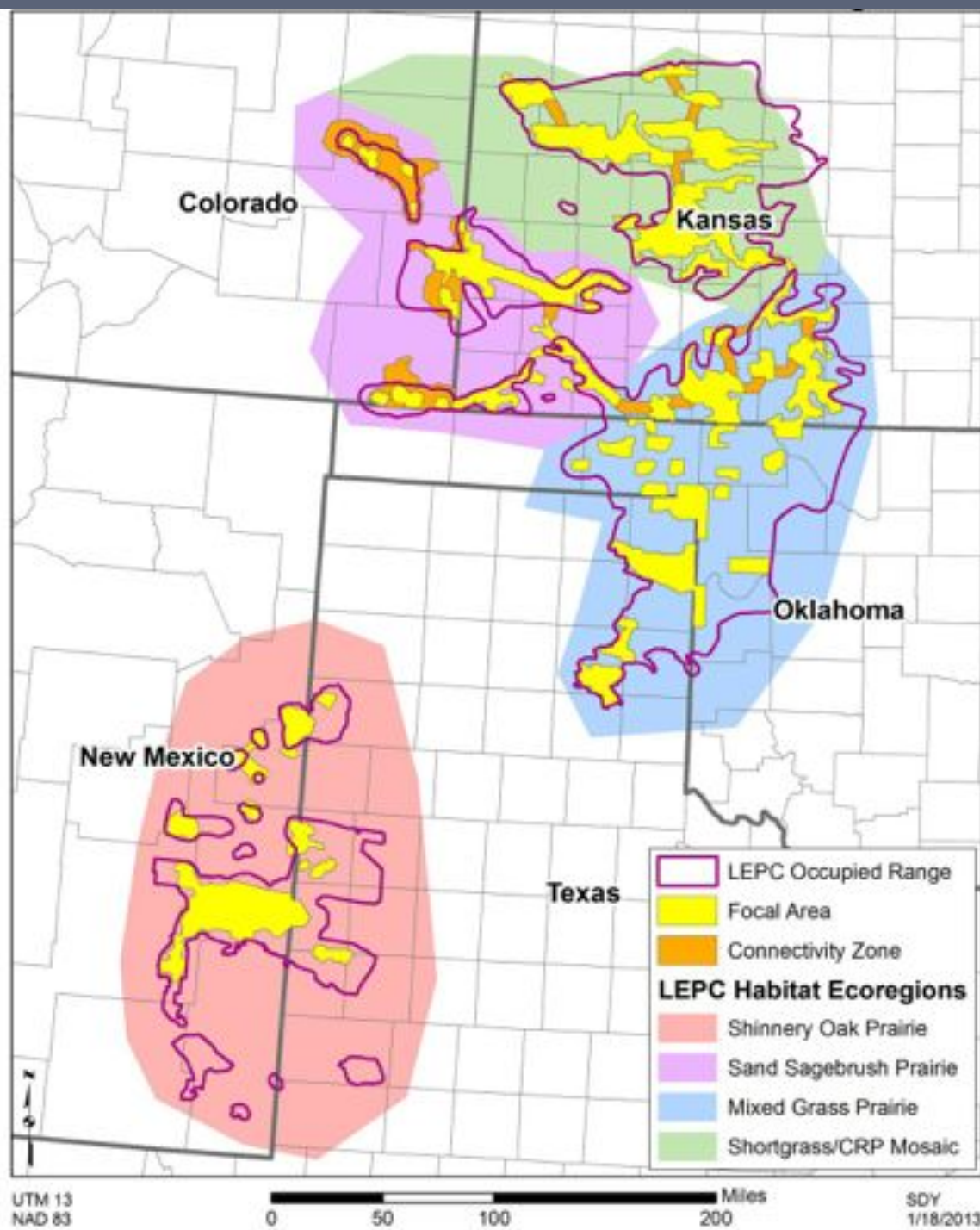
- sand shinnery oak ecoregion: 4/sq. mi.
- Shortgrass ecoregion: 9/sq. mi.
- Sand sagebrush ecoregion: 5/sq. mi.
- Mixed grass ecoregion: 9/sq. mi. in KS, 5/sq. mi. in TX and OK

Focal Area Goals

- ▣ Sand shinnery oak ecoregion: 1,371,429 acres
- ▣ Sand sagebrush ecoregion: 1,371, 429 acres
- ▣ Mixed grass ecoregion: 2,438,095 acres
- ▣ Short grass ecoregion: 1,904,762 acres
- ▣ Total: 7,085,714 acres (37% of current occupied range)

Selection of Focal Areas

- ▣ Existing population distributions- leks
- ▣ Areas of best remaining habitat
- ▣ Areas with best habitat potentials
- ▣ Proximity to WMA's or similar
- ▣ Where possible, avoid high priority development areas



Focal Area Management

- ▣ Focus areas for LEPC management-
- ▣ Maximize habitat quality within focal areas
- ▣ Avoid or minimize developments within focal areas

Optimal LEPC habitat in sand shinnery oak ecosystems

Nesting habitat

Absolute cover of sand shinnery oak: >30% but <50%

Absolute cover of preferred grasses (native bluestems, switchgrass, indiagrass, and sideoats grama): >20%

Absolute cover of a good mix of species of native forbs: >10%

Grass should average >15" in height

Brood habitat

Absolute cover of sand shinnery oak: 10-25%

Absolute cover of preferred native grasses: >15%

Absolute cover of a mix of native forbs: >20%

Grass should average >15" in height

Shrub, grass and forb understory open enough to allow movements of chicks.

Connectivity Zones

- ▣ 40% suitable LEPC habitat
- ▣ Habitat patches no more than 2 miles apart
- ▣ Zones should be about 5 miles in width
- ▣ Zones should minimize possible barriers to LEPC movements

Desirable Treatments

- ▣ Remove invasive woody species- redcedar, mesquite
- ▣ Prescribed grazing plans specific for LEPC
- ▣ Prescribed fire
- ▣ Control of invasive weeds and reduction in tame grasses
- ▣ Seeding/restoring native grasses, shrubs, and forbs
- ▣ Reduction and marking of fences near leks

Available Landowner/Land Management Programs

- ▣ NRCS, FSA- LPCI, WHIP, CRP, SAFE
- ▣ State- LEPC initiatives, WMA's
- ▣ USFWS- Partners program, CCAA's, NRCS assurances
- ▣ TNC/Land Trusts- Easement programs, management areas
- ▣ USFS and BLM- Land management programs

Coordination

- ▣ Agencies, organizations, and other partners within each state are coordinating to offer maximum delivery of programs to focal areas
 - Higher weighting for enrollment in assistance programs for landowners in focal areas
 - Possible stacking of programs
 - One-stop-shopping
- ▣ Coordination range-wide among states, Federal agencies, organizations, and others

Avoiding and Minimizing Impacts to Focal Areas

- ▣ Existing oil and gas CCAA in NM
- ▣ Existing BMP's for oil and gas in NM, TX, CO, and OK
- ▣ New initiatives
 - Wind HCP
 - Oil and gas CCAA

Mitigation Framework

- ▣ Foundation for new CCAA's, HCP's, and VOP's
- ▣ Establish metric system to quantify impacts (debits) with equivalent measurement of mitigation benefits (credits)

■

Goal of Mitigation Framework

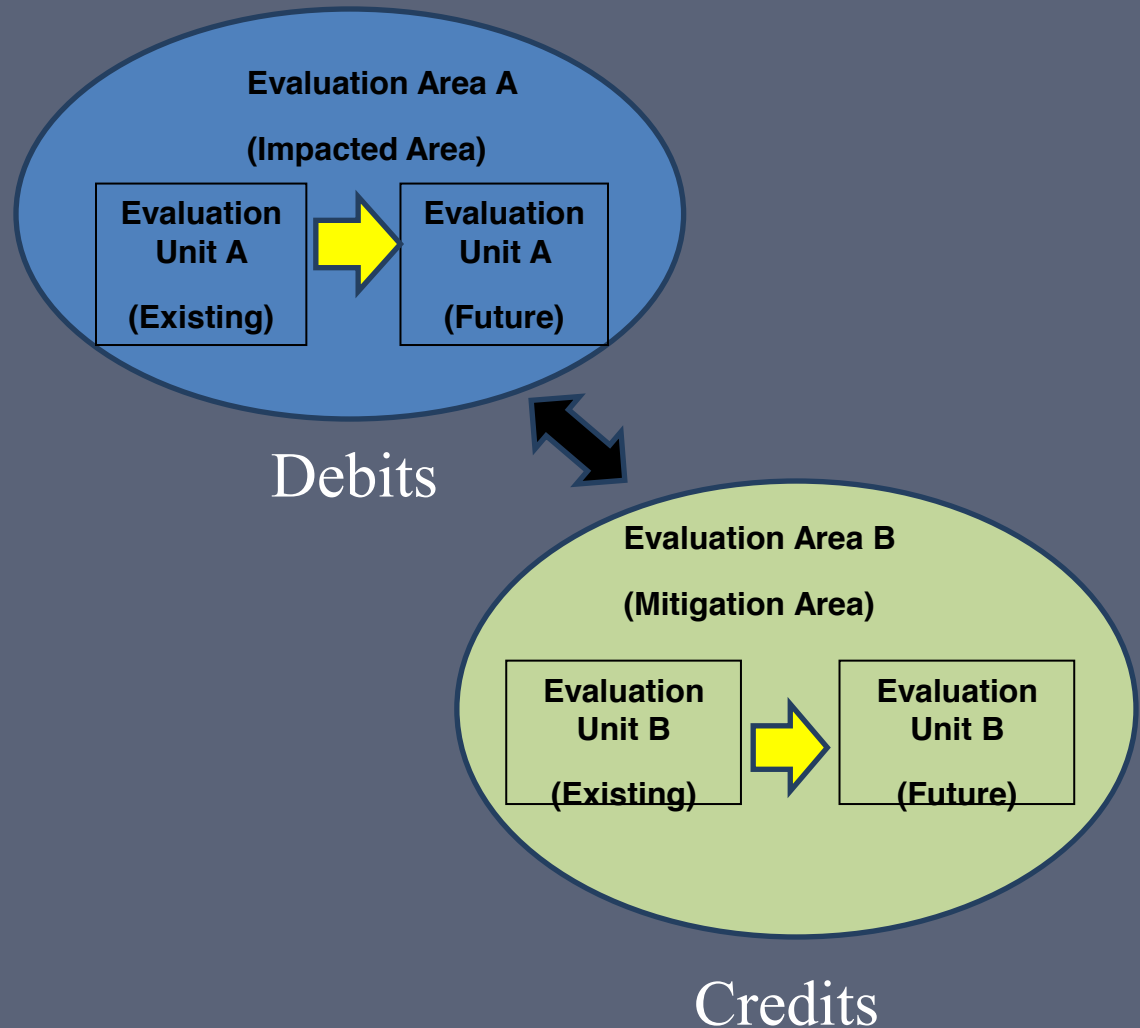
- ▣ Establish a recommended system for weighting debits and credits
 - Encourage impact avoidance in focal and other important areas
 - Encourage mitigation to occur in focal and other important areas
- ▣ Provide opportunities for credit exchanges and conservation banking
- ▣ Ensure conservation benefit for LEPC

Components of Mitigation Metrics

- ▣ Establishing baseline conditions
 - General LEPC habitat conditions
 - Existing impacts
- ▣ Quantifying impacts from new developments
- ▣ Quantifying mitigation benefits

Debits and Credits

- ▣ Debits = impacts to habitat
- ▣ Credits = offsets or improvement and creation of habitat



LEPC Habitat Considerations

- ▣ LEPC habitat quality varies with weather
 - Grass heights
 - Forb abundance
- ▣ LEPC habitat quality dynamic
- ▣ LEPC have site fidelity, but populations can shift into new habitat
- ▣ Several scales influence habitat ratings

Scale Considerations

- ▣ Site- quality of habitat patch depends on vegetation conditions
- ▣ Surrounding area- ability of site to function as nesting or brood habitat depends on conditions in surrounding sites
- ▣ Contribution of habitat in an area depends on whether it is in a habitat block that can support a local population

Debit or Credit Calculation

- ▣ Debits or credits are measured as the change (+ or -) to baseline conditions expressed as the percentage increase or decrease in habitat quality of an acre of land
- ▣ Debits or credits are measured annually because LEPC habitat quality is dynamic
- ▣ Impacts quantify both the direct (footprint) effects as well as avoidance of surrounding areas (indirect) by LEPC

Avoidance Buffers

- ▣ 3 categories for buffers > 100m: 100% reduction, 67% reduction, 33% reduction
 - Oil and gas pads: 300m
 - Wind farms/towers: 1000m
 - Transmission lines: 600m
 - Distribution lines: 200m
 - Tall vertical structures: 1000m
 - Gravel roads: 100m
 - Paved roads: 750m
 - Commercial buildings: 1000m
 - Residential buildings: 200m

Credit Generation

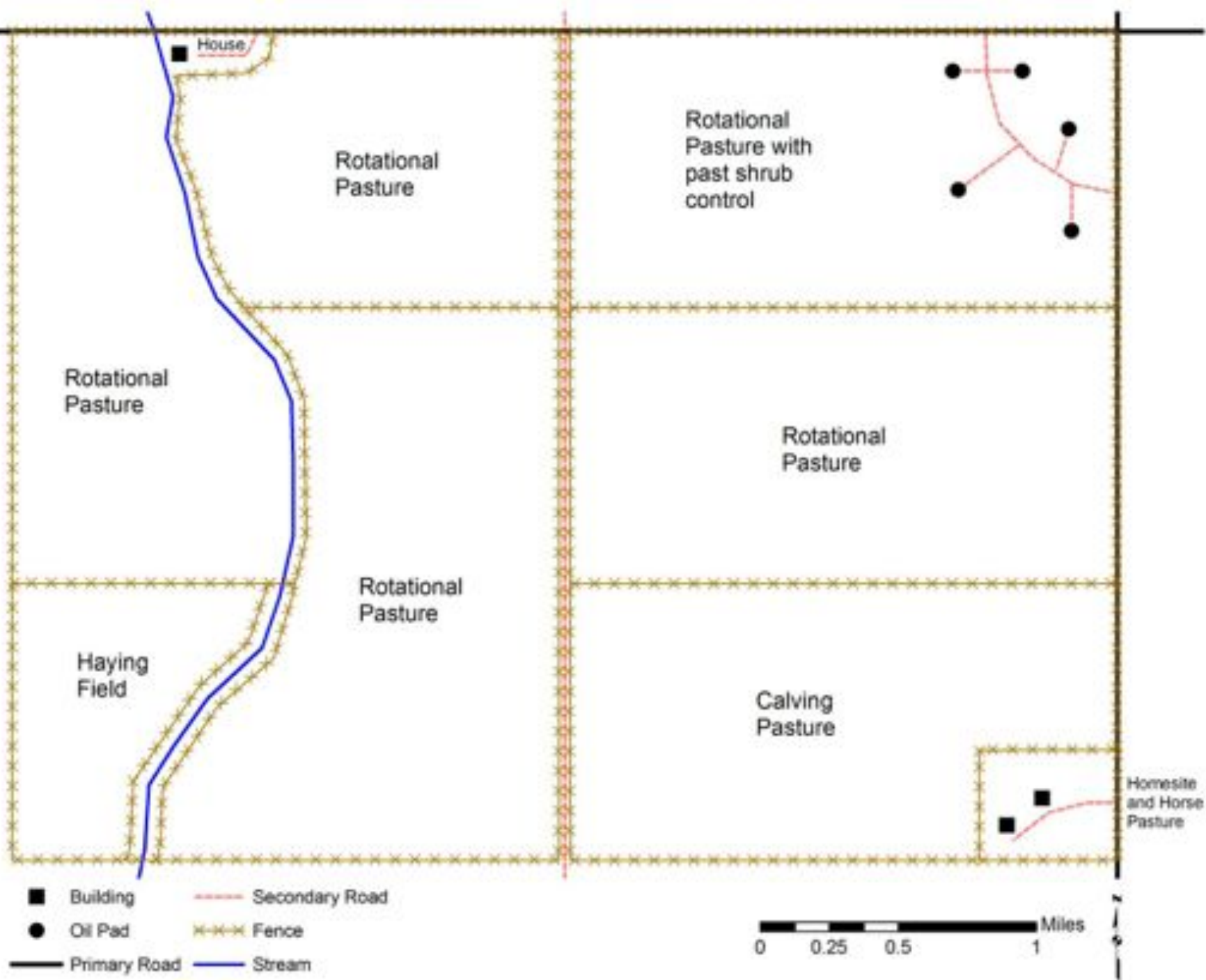
- Improving the habitat conditions so that the site score increases from the baseline score
- Applying prescribed management practices that will produce the best possible LEPC habitat quality
- Removing existing impacts

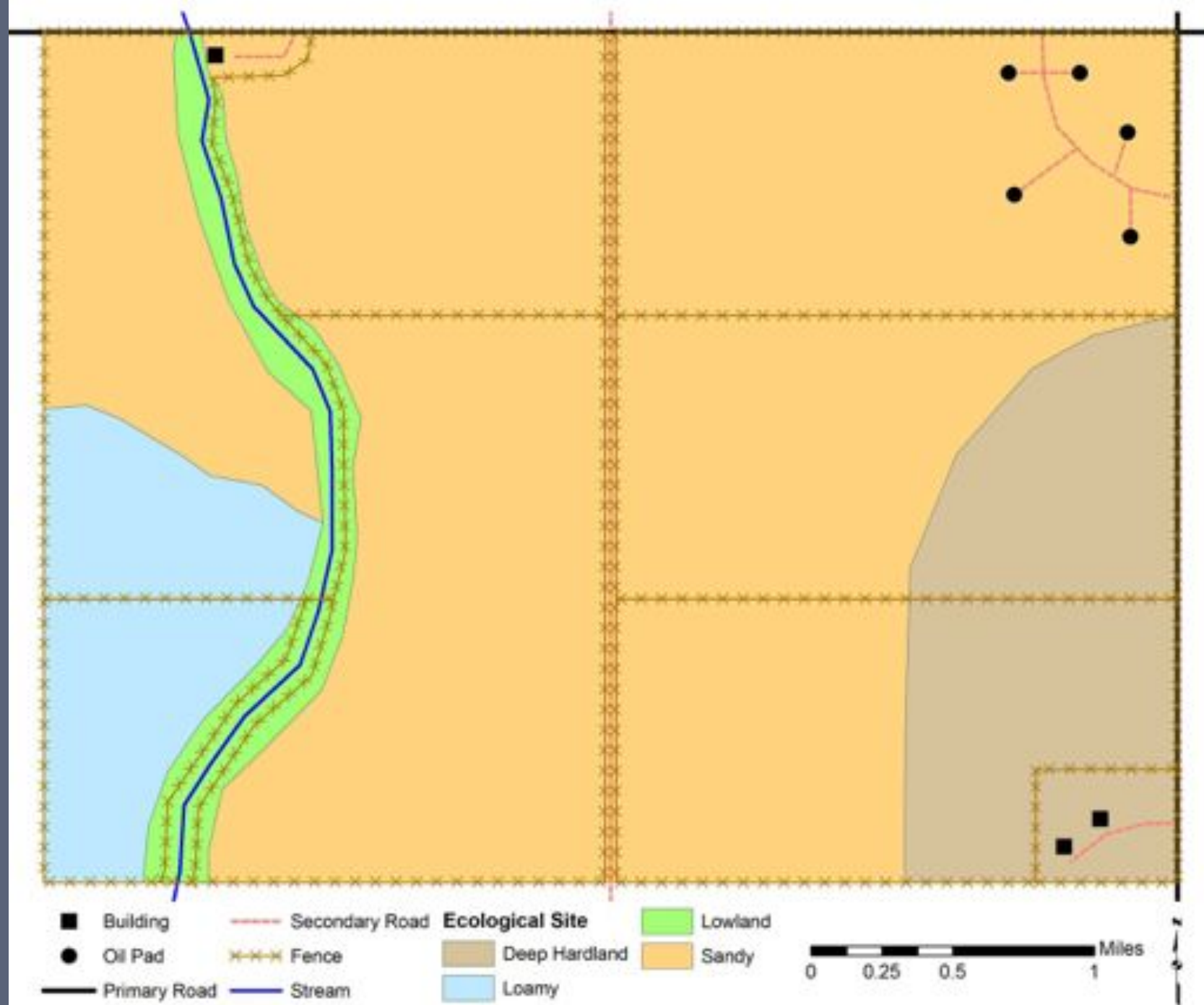
Credit/Debit Weighting

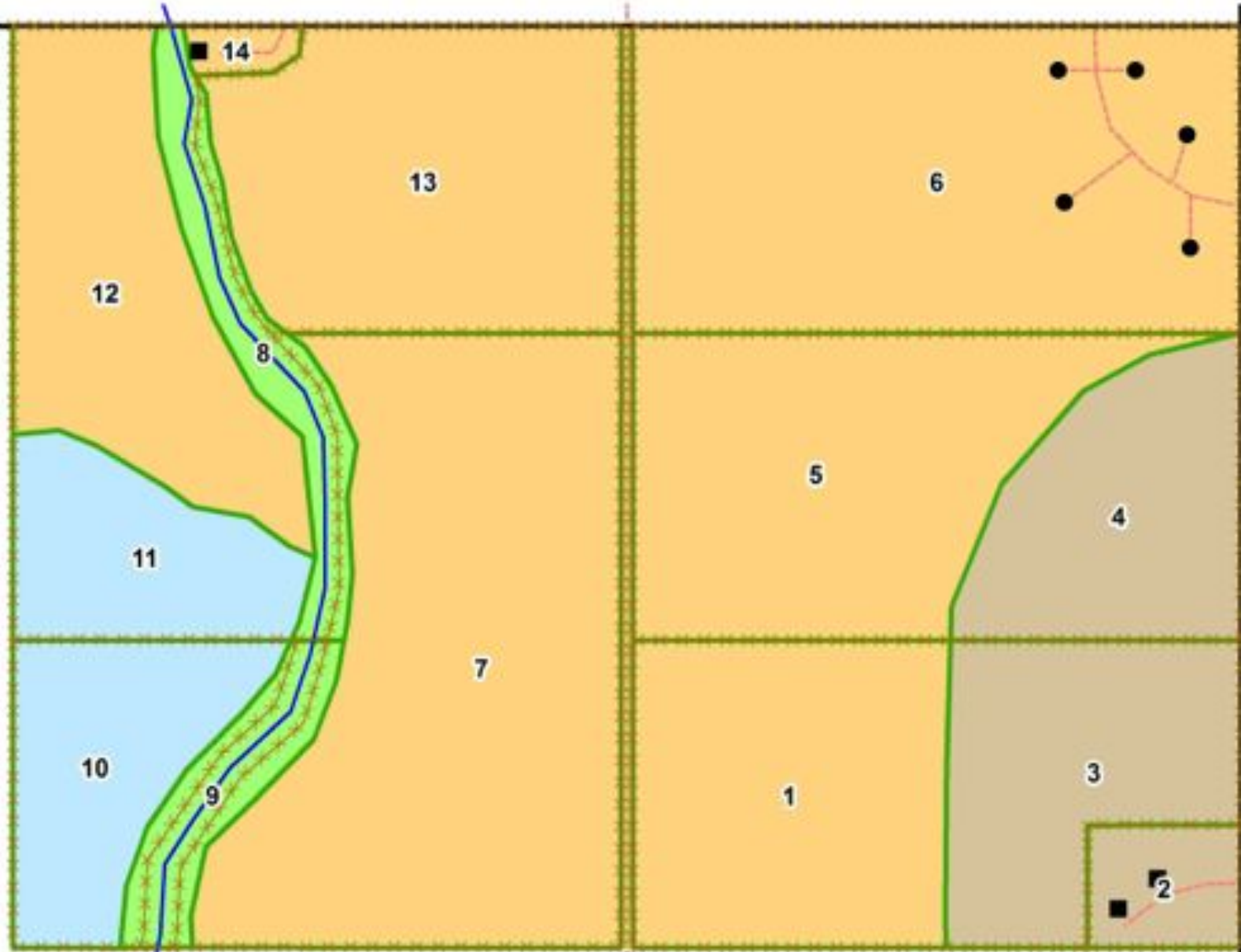
- ▣ Credits weighted at $\frac{1}{2}$ of debits
 - Population goal is approximate doubling
 - Net benefit needed for mitigation programs
 - If net benefit not provided, mitigation programs would divert resources away from LEPC conservation
- ▣ Weightings of different CHAT categories to encourage development in areas of lower importance and to encourage mitigation in areas of higher importance

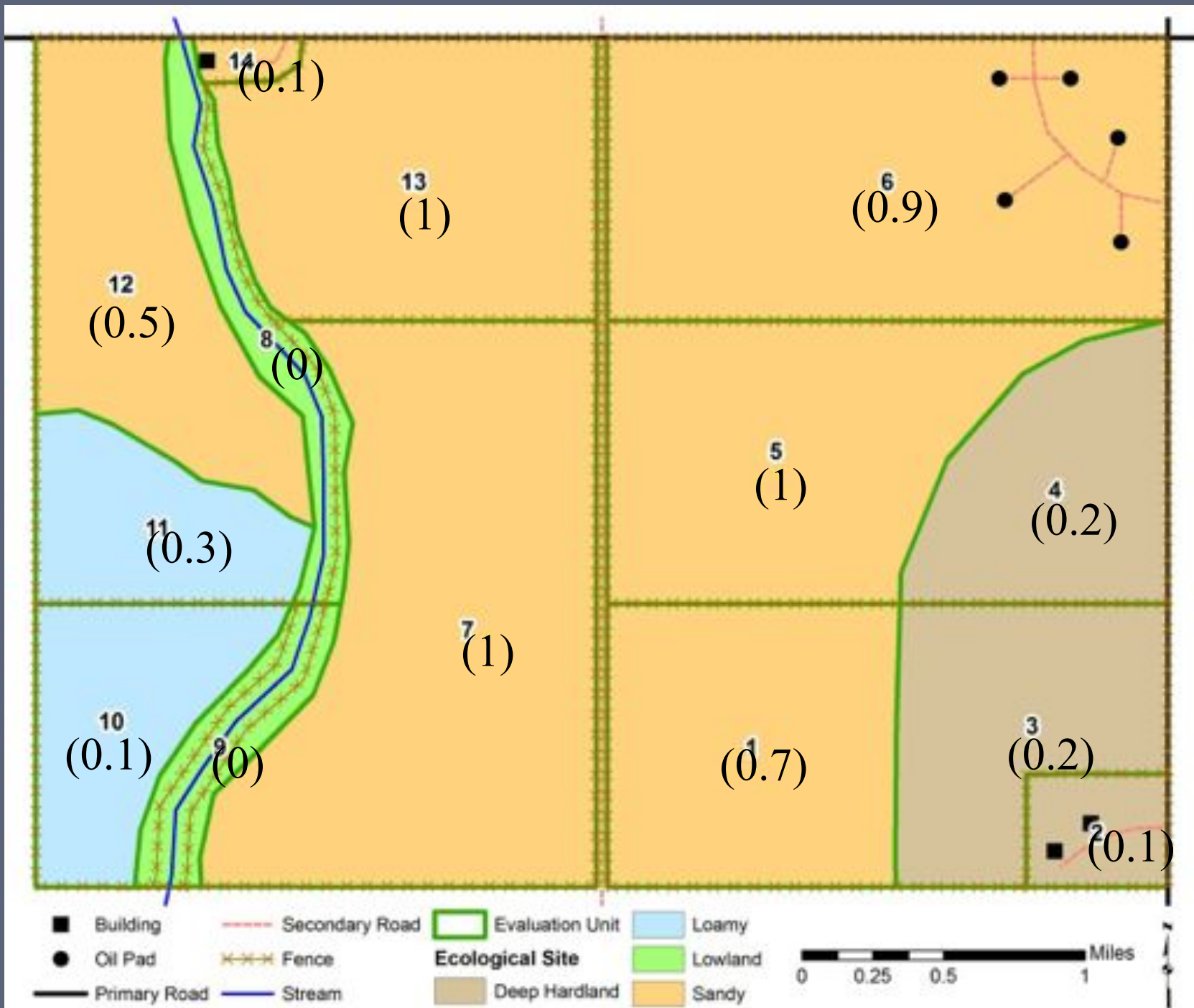
CHAT Weightings

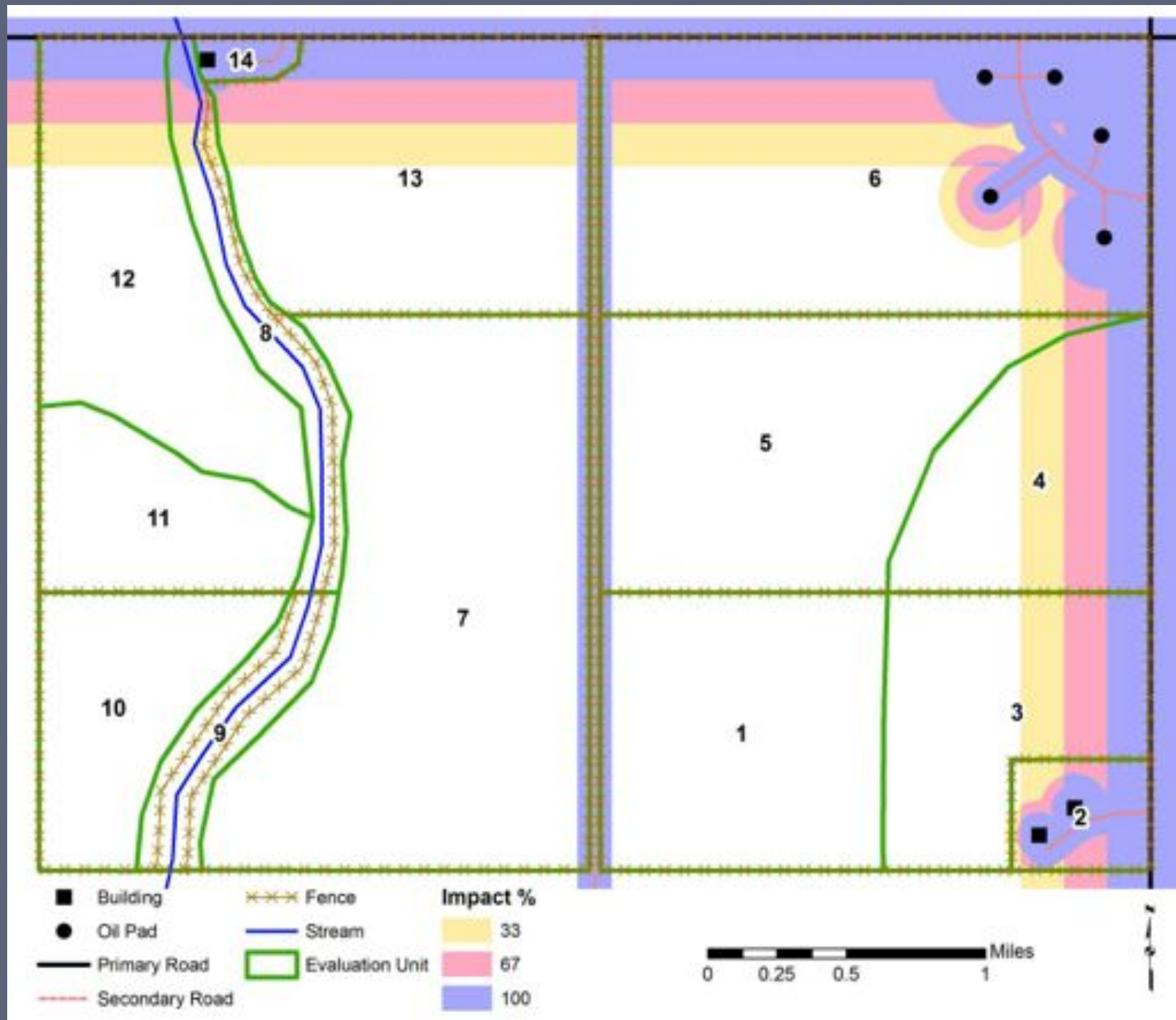
| CHAT Number | Category Name | Debit Weighting | Credit Weighting |
|-------------|---------------------------|-----------------|------------------|
| 1 | Focal area | 10 | 5 |
| 2 | Linkage and Irreplaceable | 7 | 3.5 |
| 3 | Limiting | 5 | 2.5 |
| 4 | Significant | 3 | 1.5 |
| 5 | Unknown | 1 | 1 |
| 6 | Common | 0 | 0 |

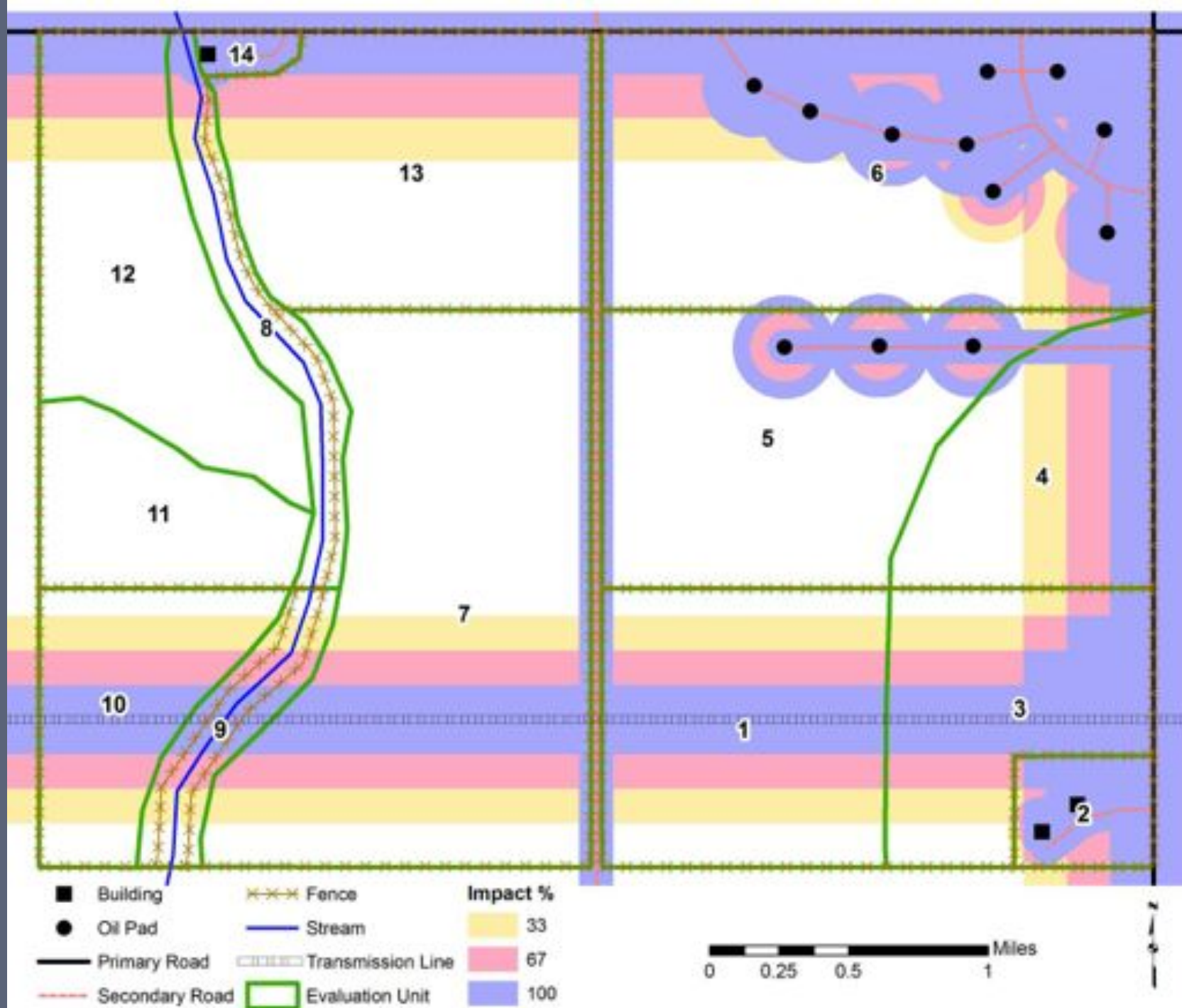












Credit generation

- ▣ Improvements to an evaluation unit resulting in an improved habitat score
- ▣ Improvements to the surrounding evaluation area increasing the score of an evaluation unit
- ▣ Implementing approved LEPC habitat improvement practices
- ▣ Eliminating existing impacts

Prescribed Management Practices

- ▣ Prescribed grazing for LEPC
- ▣ Prescribed burning for LEPC
- ▣ Mechanical tree removal
- ▣ Herbicide control of invasive or exotic species
- ▣ Thinning of sand shinnery oak
- ▣ Fence marking or removal

Application of Mitigation System

- ▣ Two divisions of debits/credits
 - One division is for long-term/permanent mitigation sites (30+): 25% of credits must be in this
 - Second division is for shorter-term mitigation sites (5-30 years): 75% of mitigation credits
- ▣ Creates two different credit trading markets

Where to Apply Mitigation Framework

- ▣ Incorporate it into programs being developed:
 - New oil and gas CCAA
 - Wind HCP
 - Any new voluntary offset programs
- ▣ Administrator of agreement ensures that an appropriate debit/credit accounting system is in place
- ▣ Credit generators (conservation banks, credit trading facilitators) provide assurances of credits

Strongholds

- ▣ A subset of focal areas
 - Blocks of habitat that are permanently placed into LEPC management
 - 25,000+ acres in size
 - 50,000+ acres desired within each ecoregion
- ▣ Specifically dedicated public lands or voluntary agreements by landowners

Monitoring

- ▣ Population monitoring
 - Range-wide helicopter lek surveys of random survey grid (15 X 15 km) tracked for management actions
- ▣ Vegetation monitoring of mitigation sites
 - At minimum, use NRCS vegetation monitoring protocol
- ▣ NRCS monitoring of treatments and telemetry studies of population responses to management

Research Needs

- ▣ LEPC responses to anthropogenic structures and activities
- ▣ LEPC population responses/densities in varying habitat qualities, patch sizes, and distributions
- ▣ Habitat responses to management treatments across different ecological sites and in different weather patterns

Adaptive Management

- ▣ Plan needs to provide certainty, but also needs to be dynamic to new, significant additions to LEPC knowledge base
- ▣ Maintain a science team to review new information and suggest when adjustments are needed
- ▣ Review and revise plan after 5 years

Summary of Conservation Strategy

- ▣ Strategy sets population and habitat goals
- ▣ Strategy emphasizes focal areas
- ▣ Numerous current efforts underway that target delivery of habitat improvement on private and public lands
- ▣ Existing and on-going efforts are designed to avoid new impacts from development especially in focal areas. Where impacts are unavoidable initiatives are underway to minimize them and conduct off-site mitigation

Comments on First Draft of Plan

Accepted through
February 1 to:

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WAFWA Website:

[www.wafwa.org/html/prairie_
chicken.shtml](http://www.wafwa.org/html/prairie_chicken.shtml)

