



Nevada Credit System Manual Developments

SEC Meeting - October 27, 2014

Objectives

- 1) Gain understanding of Credit System implementation timeline
- 2) Gain understanding how the Credit System ensures “additionality” and will determine site-scale regional credit baseline
- 3) Gain direction to refine proposed limiting habitat mitigation ratio
- 4) Gain direction to refine reserve account factor - adverse impacts from wildfire

CREDIT SYSTEM IMPLEMENTATION TIMELINE

Nevada Conservation Credit System is *Open for Business*

- Currently piloting projects
- Manual and HQT will be finalized in December 2014
- Annual systematic adaptive management

State of Nevada Conserva x

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Regional Environmental Accounting

STATE OF NEVADA
CONSERVATION CREDIT SYSTEM

Achieve no net unmitigated loss of greater sage-grouse habitat from anthropogenic disturbances and create regulatory certainty.


VIEW MORE

Nevada Road Photography

State of Nevada Conservation Credit System:

The Conservation Credit System (Credit System) is a pro-active solution to ensure impacts from human activities generate a net benefit for the species, while enabling human activities vital to the Nevada economy and way of life. The Credit System creates new incentives for 1) human activities to avoid and minimize impacts to important habitat for the species, and 2) private landowners and public land managers to preserve, enhance, restore, and reduce the threat of wildfire to important habitat for the species.

The Credit System is a market-based mechanism that quantifies conservation outcomes (credits) and impacts from human activities (debits), operationalizes market transactions, and reports the overall progress from implementation of conservation actions throughout the greater sage-grouse range within Nevada. The Credit System establishes the policy, operations and tools necessary to facilitate more effective and efficient conservation investments. The Credit System is intended to provide regulatory certainty for industries by addressing compensatory mitigation needs whether or not the species is listed under the Endangered Species Act.



About this site

Better environmental outcomes can be achieved for lower cost when program strategies are clear and shared. This site strives to provide the public with simple, straight-forward access to information about this program.


Please let us know if the information you want isn't here, or if you have any questions.

News & Announcements

Oct 25 2014 Credit projects wanted!
The Credit System is open for business and credit projects are needed to fulfill expected demand in 2015. Private land owners and parties interested in developing credits on public lands should... [More](#)

Interested in...

Learning How to Generate Credits and Invest in Greater Sage-Grouse Conservation?



Learning More About the Nevada Conservation Credit System?

Please contact:
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ADDITIONALITY INCLUDING SITE-SCALE REGIONAL CREDIT BASELINE

Additionality Overview

FWS GrSG Range-Wide Mitigation Framework

Definition: Benefits beyond those that would be achieved if the mitigation actions had not taken place.

Nevada Conservation Credit System

Practical Need: Determine how much credit is given to a project.

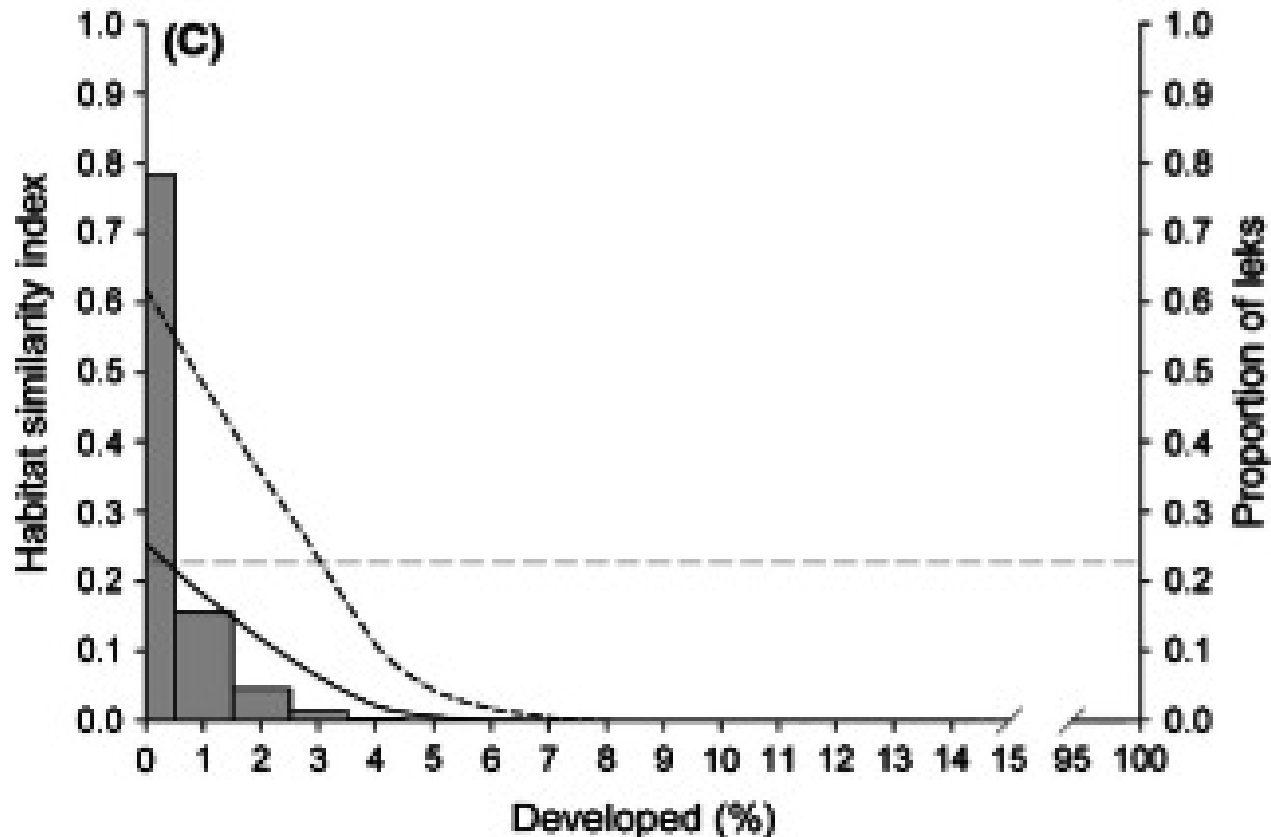
Goal: Achieve programmatic net benefit over the trajectory that habitat function would be in the future IF the mitigation actions had not taken place.

Challenges

- Valid & existing rights + split estates
- Indirect disturbances
- Delivering on-the-ground outcomes

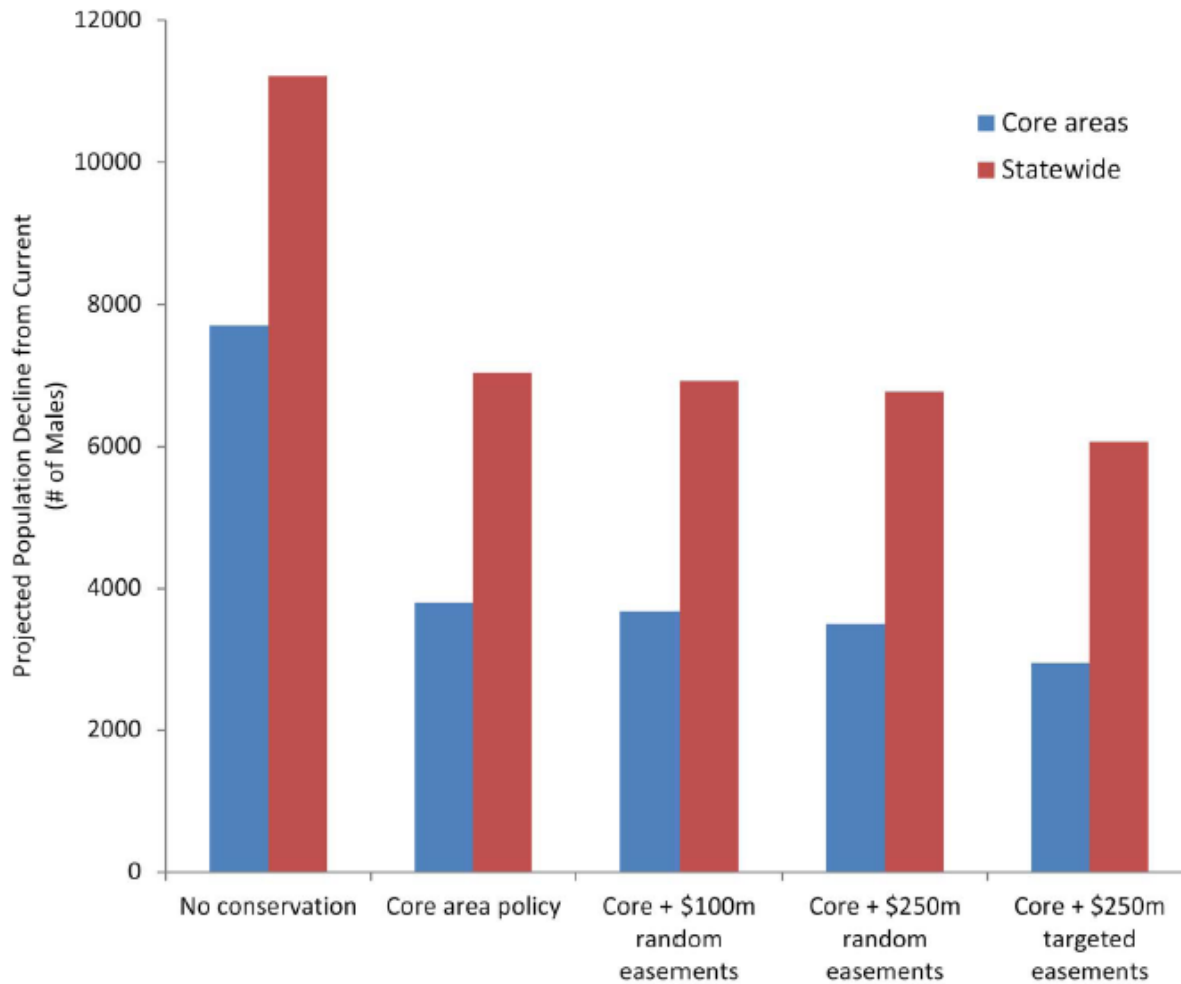
Indirect Effects Matter

Sagebrush (%)



Knick, Hanser & Preston. Modeling ecological minimum requirements for distribution of greater sage-grouse leks: implications for population connectivity across their western range, USA. *Ecology and Evolution*. 2013.

Minimization Results in Declines



Credit System Credit Calculation

Credit Amount = post-project condition – credit baseline

Credit Baseline =

(Landscape-scale condition

X Surrounding-scale condition

X Site-scale regional credit baseline)

+ Site-specific condition that would have occurred anyway

FWS Framework Considerations

- Site-specific condition
- Site-specific threats
- Public projects and lands
- Other payments

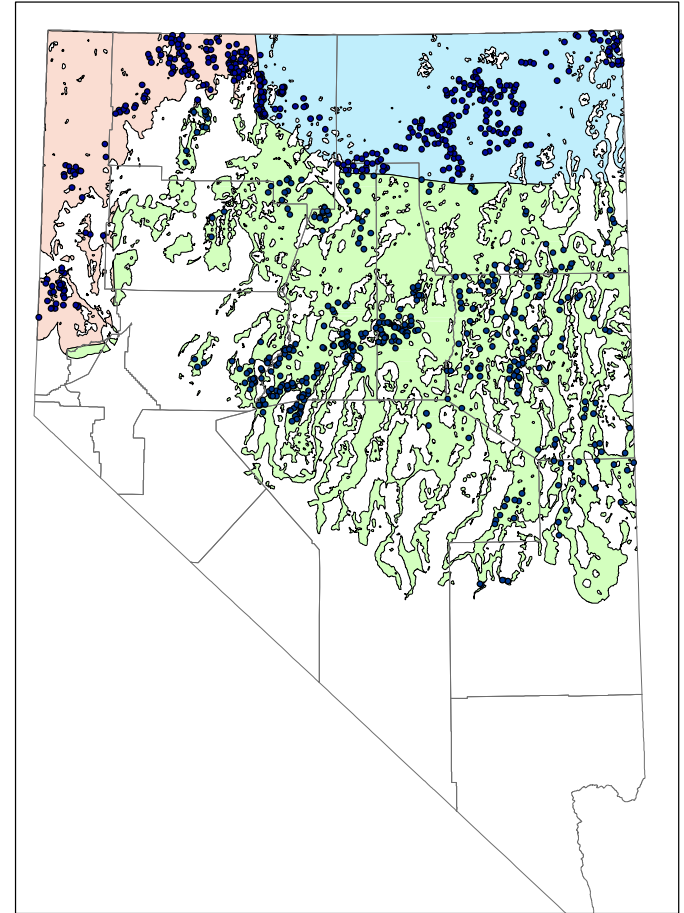
Approach to Estimate Site-Scale Regional Credit Baselines

BLM Assessment, Inventory and Monitoring (AIM) Data

- Provides a quantitative assessment of rangeland health on BLM lands.
- Sample design methods provide unbiased, statistically valid sampling framework.
- ~1,244 permanent monitoring locations on Nevada BLM lands established 2011 – 2013.

SEP Analysis Method

- SEP use sample points within Suitable Habitat within WAFWA MZs
- SEP generate regional estimates per seasonal habitat type per WAFWA MZ



AIM Data Qualifiers

- BLM Lands Only
- No sampling on Nevada BLM lands managed by CA Field Office (MZV)
- Different sampling methods than HQT
- Sampling throughout the field season
- Data collected during drought years
- Riparian plot locations excluded

Site-Scale Regional Credit Baseline Values

Outstanding needs

- Final site-scale scoring curves
- Revised Habitat Suitability Map
- TRG review

WAFWA MANAGEMENT ZONES

Habitat Type	MZ III	MZ IV	MZ V
Nesting	%	%	%
Late Brood-Rearing	%	%	%
Winter	%	%	%

LIMITING HABITAT METHOD & MITIGATION RATIO

Limiting Habitat Mitigation Ratio

Issue Addressed

GrSG depend on different types of habitat to accommodate different phases of their life. If one or more of these habitat types is impacted to the point that it can no longer support the corresponding life cycle phase, then the entire area is potentially no longer suitable for the greater sage-grouse.

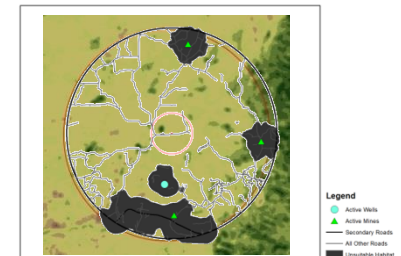
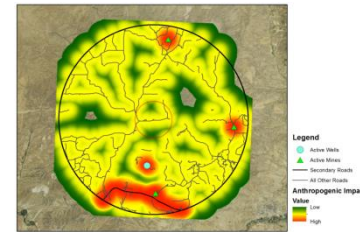
Purpose

Incorporate the effect of a credit or debit on each seasonal habitat type relative to the amount of the specific seasonal habitat currently available to the affected population, in order to

- Encourage enhancement and protection of limiting habitat
- Avoid impacts to limiting habitat

Summary of Limiting Habitat Analysis Method

- 1) Develop map for each seasonal habitat type within and surrounding the project site
 - Start with seasonal habitat map
 - Exclude habitat significantly disturbed existing anthropogenic disturbances
 - Exclude non-suitable habitat
- 2) Calculate the proportion of each seasonal habitat type within the analysis window for each map unit



MAP UNIT 12
Abundance of Each Habitat Type in Analysis Window
Nesting – 35,000 ac.
Winter – 45,000 ac.
LBR – 1,000 ac.

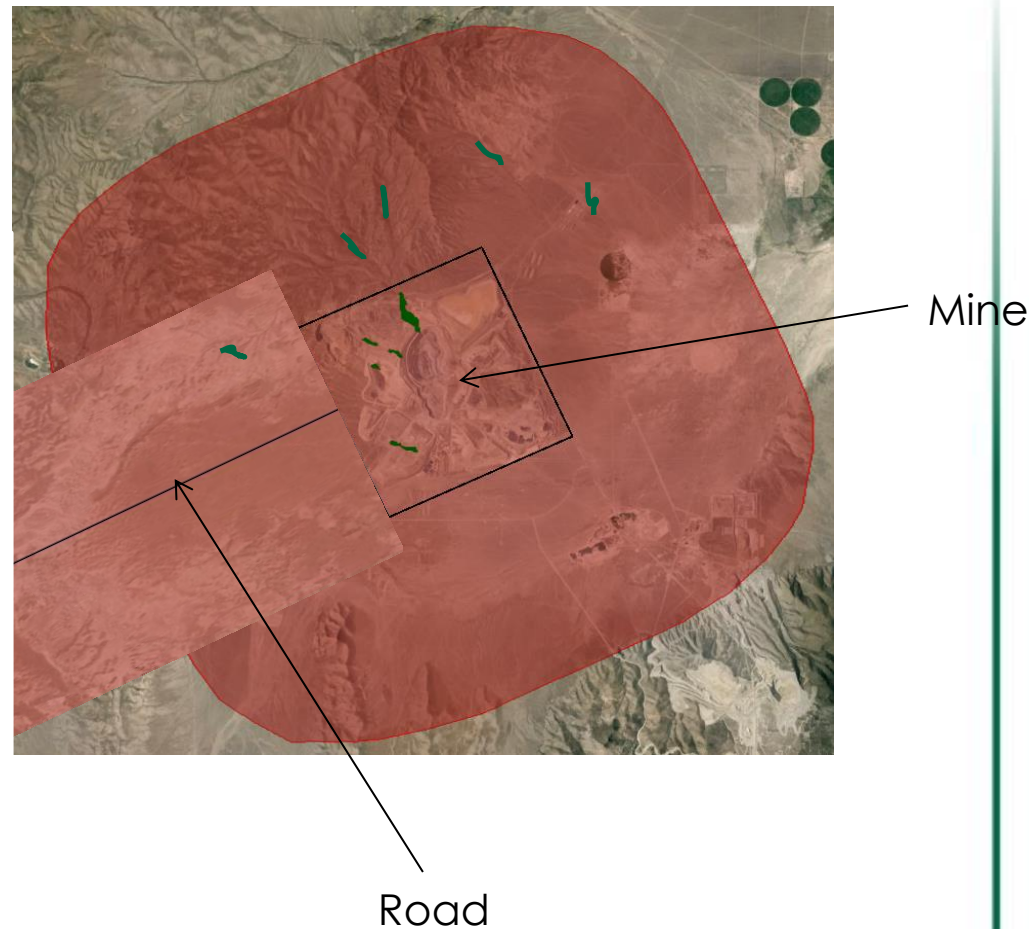
Limiting Habitat Mitigation Ratios

- Ratio for each habitat type is multiplied against functional-acre gain/loss of each map unit associated to the habitat type.

Nesting & Winter		Late Brood-Rearing	
Proportion of Analysis Window	Mitigation Ratio	Proportion of Analysis Window	Mitigation Ratio
≥ 40%	1	≥ 4%	1
≥ 35 to < 40%	5	≥ 3 to < 4%	25
≥ 30 to < 35%	10	≥ 2 to < 3%	50
≥ 25 to < 30%	15	≥ 1 to < 2%	75
< 25%	20	≥ 0.9 to < 1%	100
		≥ 0.8 to < 0.9%	111
		≥ 0.7 to < 0.8%	125
		≥ 0.6 to < 0.7%	143
		≥ 0.5 to < 0.6%	167
		≥ 0.4 to < 0.5%	200
		≥ 0.3 to < 0.4%	250
		≥ 0.2 to < 0.3%	333
		< 0.2%	500

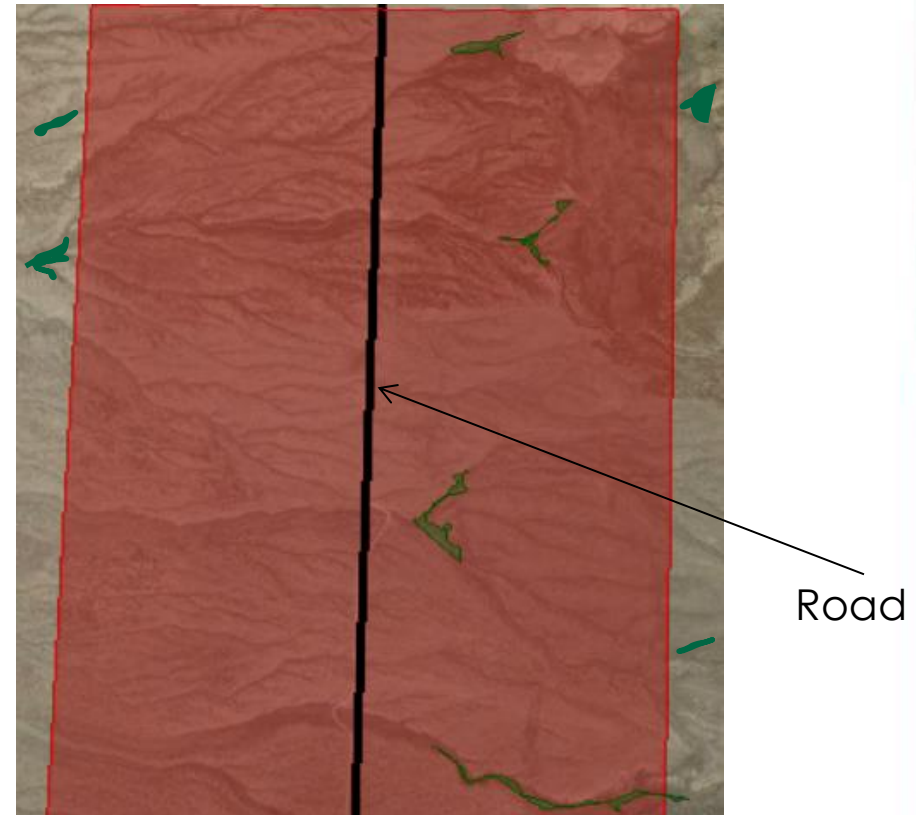
10,000 Acre Mine with 6 Mile Road Project Scenario

- 10,060 acre surface disturbance
- “Very Bad” case
 - Core management category
 - Limiting late brood-rearing habitat – 180 acres directly, 380 acres indirectly and 600 acres surrounding project
 - High quality (60%)
- “Middle of the Road” case
 - Priority management category
 - Moderately limiting late brood-rearing habitat – 100 acres directly, 480 acres indirectly and 2,000 acres surrounding project
 - Medium quality (40%)



6 Mile Improved Gravel Road

- 60 acre surface disturbance
- “Very Bad” case
 - Core management category
 - Limiting late brood-rearing habitat – 90 acres indirectly and 1,050 acres surrounding project
 - High quality (60%)
- “Middle of the Road” case
 - Priority management category
 - Moderately limiting late brood-rearing habitat impacted – 100 acres indirectly and 2,500 acres surrounding project
 - Medium quality (40%)



25,000 Acre Site with Conifer Removal

- 25,000 acres with Phase I conifer removal from 1,000 acres
- “Great” case
 - Core management category
 - Limiting late brood-rearing habitat – 200 acres in project area and 950 acres surrounding project
 - High quality (65%)
- “Middle of the Road” case
 - Priority management category
 - Moderately limiting late brood-rearing habitat – 360 acres in project area and 2,800 acres surrounding project
 - Medium quality (45%)



10,000 Acre Site with Riparian Area Improvements

- 10,000 acres with minimal stream channel restoration and protection of riparian area
- “Great” case
 - Core management category
 - Limiting late brood-rearing habitat – 80 acres in project area and 1,050 acres surrounding project
 - High quality (65%)
- “Middle of the Road” case
 - Priority management category
 - Moderately limiting late brood-rearing habitat – 130 acres in project area and 3,000 acres surrounding project
 - Medium quality (45%)



Project Scenarios

Development Projects

10,000 Acre Mine with 6 Mi. Road

“Very Bad Case”

- All Core
- Limiting Late Brood-Rearing (0.92%)
- 60% Avg Func

6 Mi. Road

“Middle of the Road”

- All Priority
- Moderately Limiting Late Brood-Rearing (2.05%)
- 40% Avg Func

“Great Case”

- 10% Avg Func
- All General
- No Limiting

Conservation Projects

25,000 Acre with Conifer Removal

“Great Case”

- All Core
- Limiting Late Brood-Rearing (0.92%)
- 65% Avg Func

10,000 Acre with Riparian Area

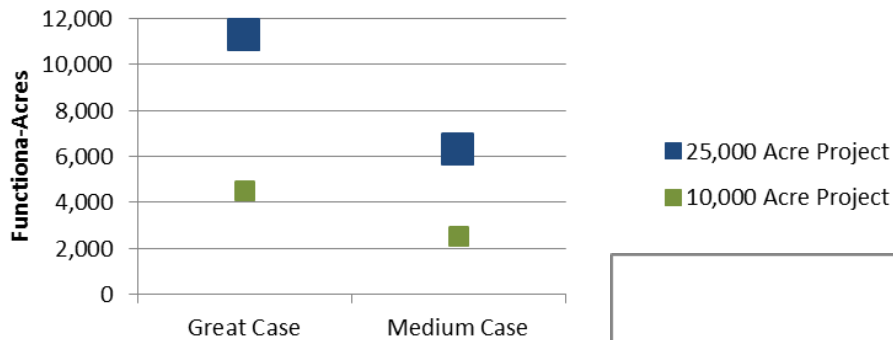
Improvements

“Middle of the Road”

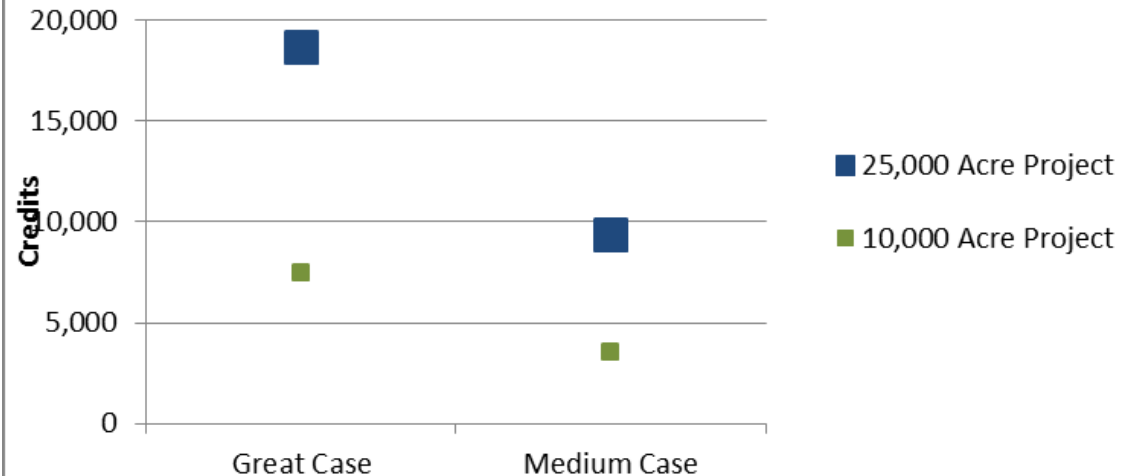
- All Priority
- Moderately Limiting Late Brood-Rearing (2.5%)
- 45% Avg Func

Credit Project Scenario Change in Credits Generated

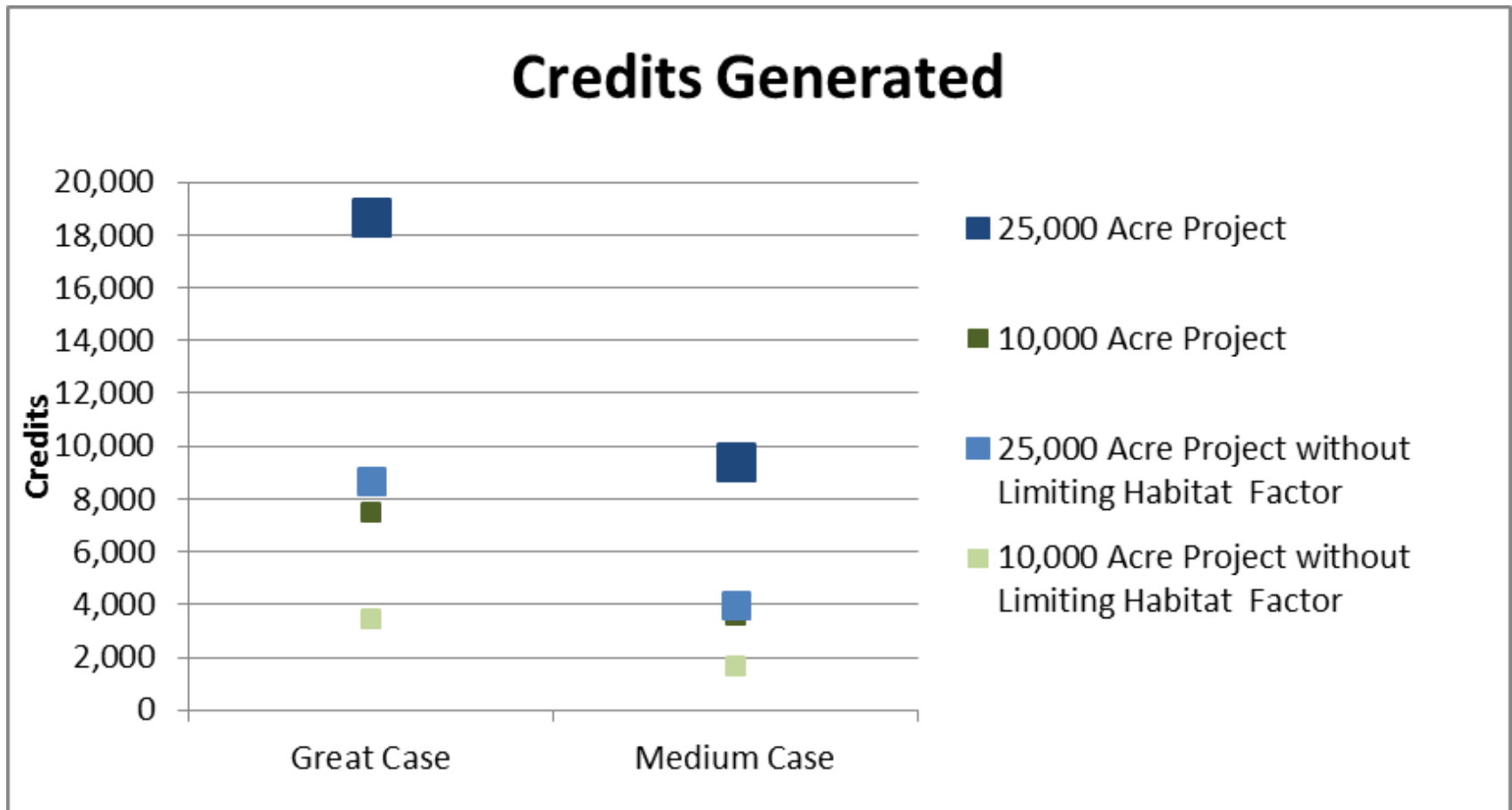
Functional-Acres Conserved Above Baseline



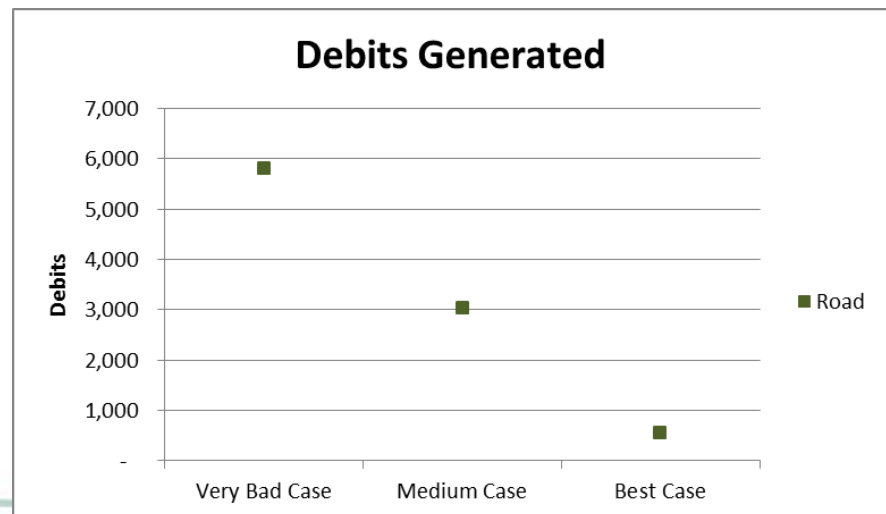
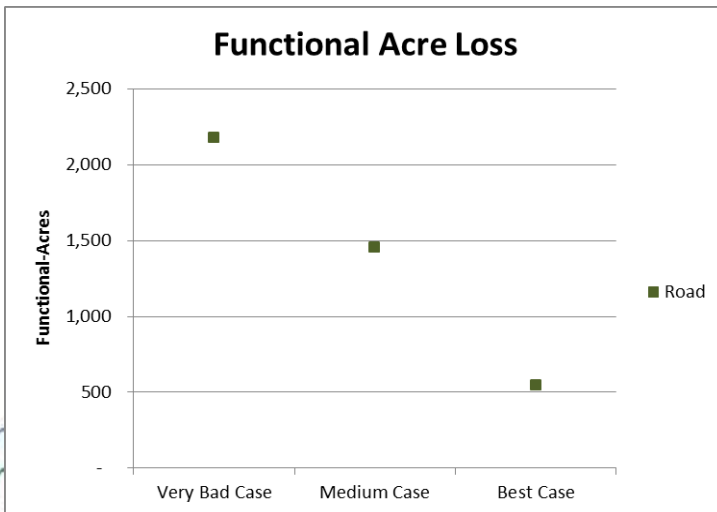
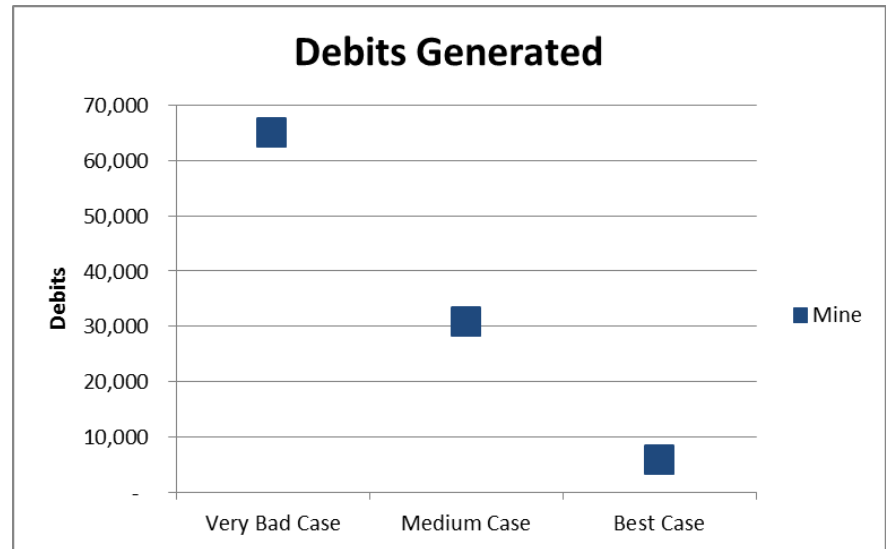
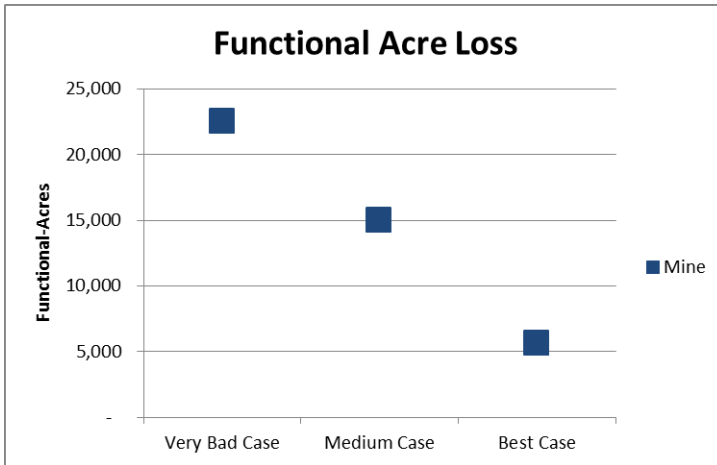
Credits Generated



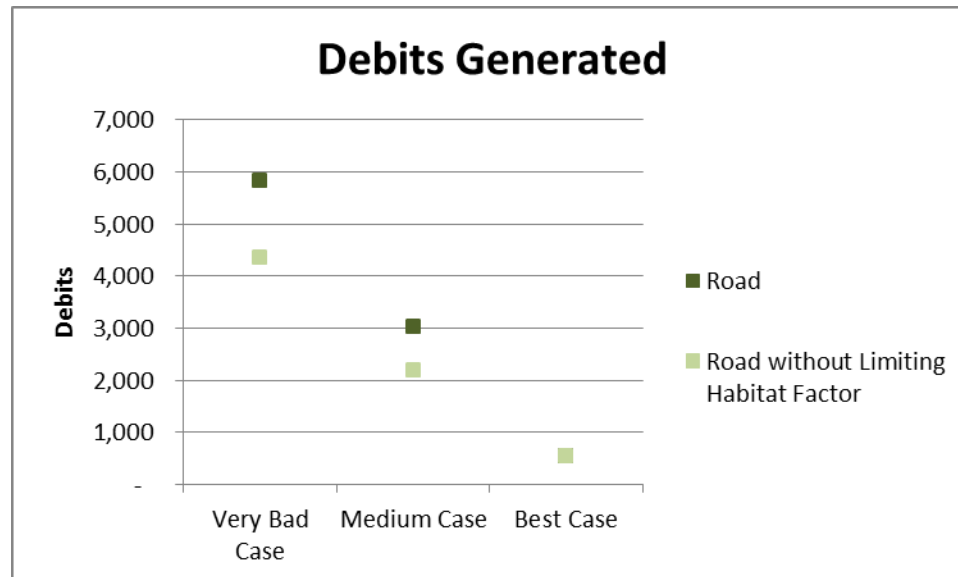
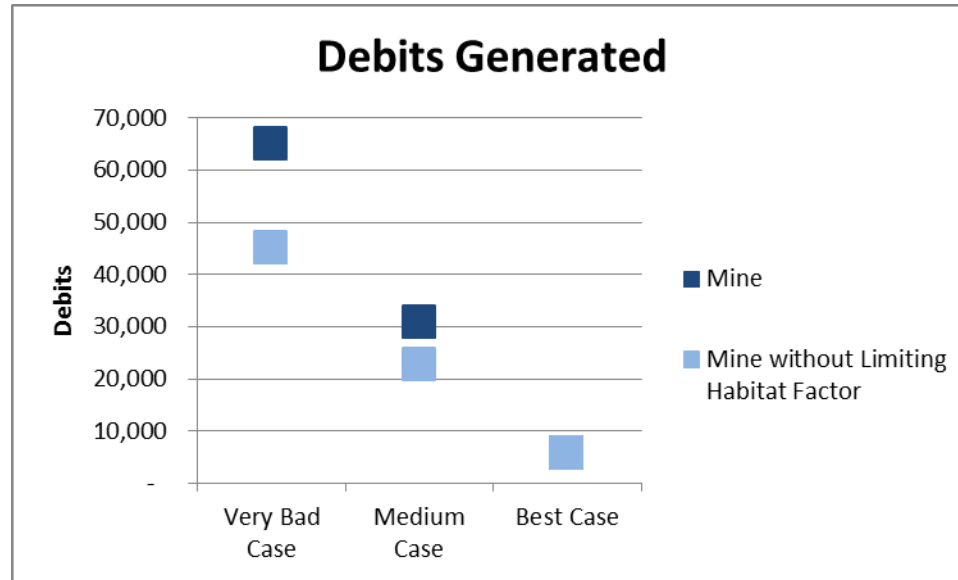
Limiting Habitat Factor Influence on Credits Generated



Debit Project Scenario Change in Debits Generated



Limiting Habitat Factor Influence on Debits Generated



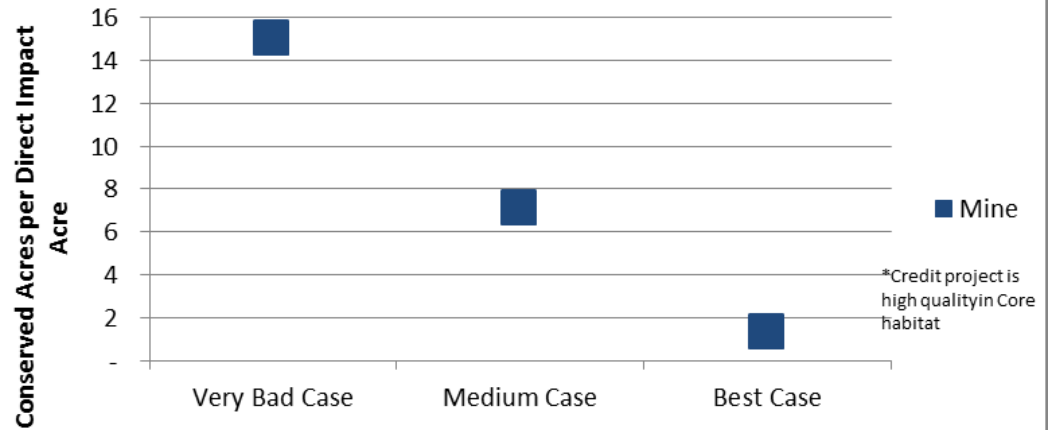
Conservation Area to Direct Impact Area

Acres Conserved

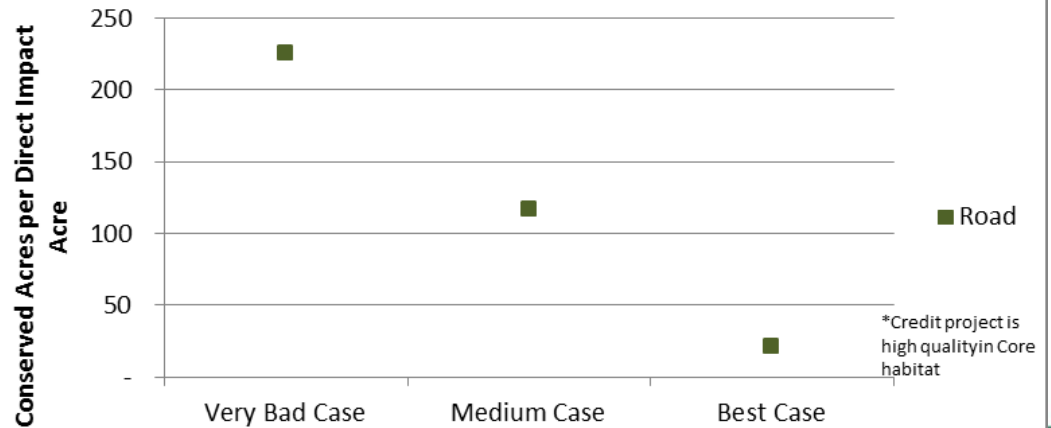
Surface Disturbance (acres)



Conserved Area to Direct Impact Area*



Conserved Area to Direct Impact Area*



Limiting Habitat Mitigation Ratios

Nesting & Winter		Late Brood-Rearing	
Proportion of Area	Mitigation Ratio	Proportion of Area	Mitigation Ratio
≥ 40%	1	≥ 4%	1
≥ 35 to < 40%	5	≥ 3 to < 4%	25
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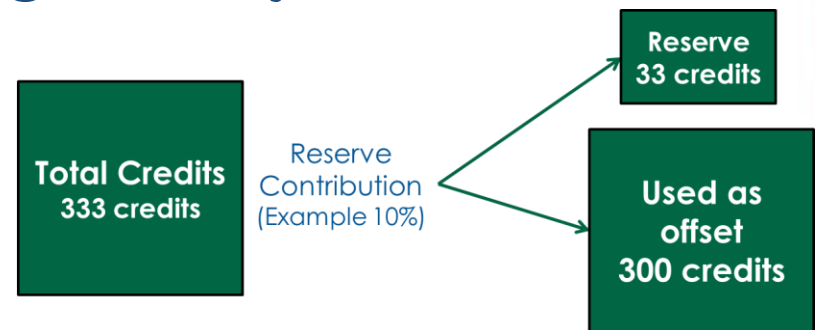
RESERVE ACCOUNT FACTOR - ADVERSE IMPACTS FROM WILDFIRE

Reserve Account Overview

- **Purpose:** Ensure that there are always more credits than debits in the program

- **Deposits:** Base Percentage + Adjustments

- Base Contribution
- Adverse Impacts from Wildfire
- Competing Land Use
- Proper Functioning Condition



- **Withdrawals:** Temporarily cover invalidated credits from force majeure, competing land uses and contract breach

Adverse Impacts from Wildfire Factor

Objectives:

- 1) Ensure the reserve account is capable of covering credits invalidated by wildfire
- 2) Encourage credits to be located in areas that are less likely to be impacted by and recover from wildfire

Components:

- Resistance and Resilience
- Ability to Control

Resistance and Resilience

Analysis Method: Miller et al field guide and scorecard

RESISTANCE & RESILIENCE	SCORECARD SCORE	DRAFT CONTRIBUTION VALUE
High	>20	0%
Moderate	15-20	2%
Low	10-14	4%
Very Low	<10	6%

Ability to Control

Analysis Method: Checklist currently under development by SEP that assesses common risk factors that influence ability of firefighting resources to control a fire, including topography, ease of access, and ***existing and new pre-suppression facilities***

RESISTANCE & RESILIENCE	CHECKLIST SCORE	DRAFT CONTRIBUTION VALUE
High	TBD	0%
Moderate	TBD	3%
Low	TBD	6%