

January 23, 2014

# Nevada Conservation Credit System SEC Meeting



# OBJECTIVES

- Define SEC Committee engagement
- Establish understanding of framework and considerations
- Gain initial thoughts on design considerations

# AGENDA

Subject	Speaker
SEC Committee Engagements	Eoin
Habitat Quantification Tool Update	Steven
Credit System Manual Overview	Jeremy

# THANK YOU

- **Tim Rulald and the Sagebrush Ecosystem Technical Team**
- **Jen Newmark – NV Natural Heritage Program**
- **Technical Review Group**

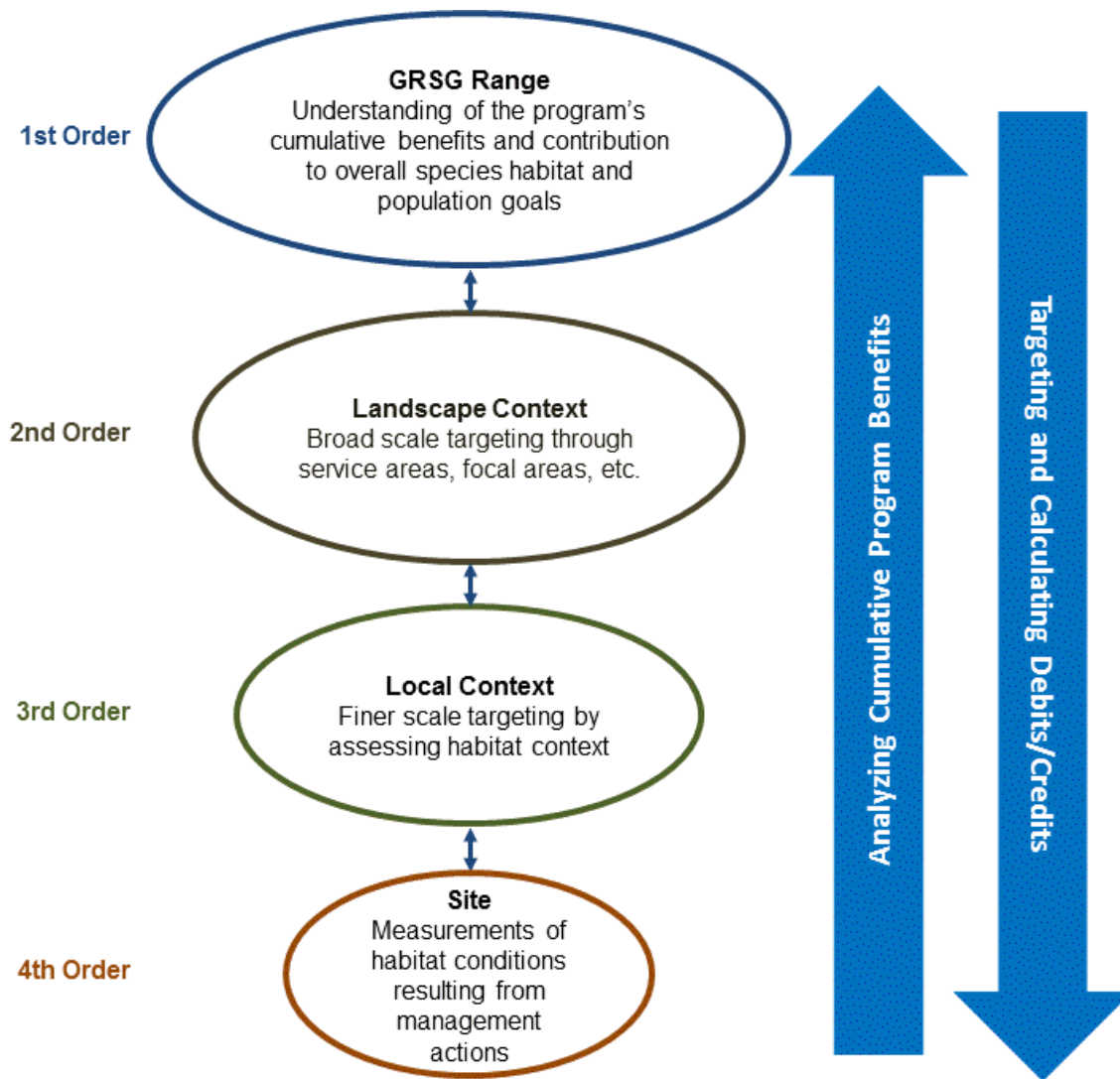
For moving ahead quickly

Note: these slides have not been thoroughly reviewed by the above due to time constraints

# HABITAT QUANTIFICATION TOOL TECHNICAL REVIEW GROUP

- James Sedinger (UNR)
- Jean Chambers (FS)
- Ron Baxter (FWS)
- Sandra Brewer (BLM)
- Shawn Espinosa (NDOW)

# HABITAT QUANTIFICATION TOOL FRAMEWORK & TRG REVIEW



# CONSERVATION CREDIT SYSTEM

## INTRODUCTION

- 1) Goal**
- 2) Guiding Principles**
- 3) Scope**
- 4) Organizational Structure & Roles**
- 5) Benefits of Participation
- 6) Approach
- 7) Policy & Operational Overview

# CONSERVATION CREDIT SYSTEM GOAL

*Efficiently achieve no net unmitigated loss of Greater Sage-Grouse habitat due to anthropogenic disturbances.*



# GUIDING PRINCIPLES

- Produce high quality conservation where it makes significant ecological difference
- Foster transparency, accountability, and credibility
- Improve the effectiveness of greater sage-grouse conservation efforts and the efficiency of the Conservation Credit System over time
- Base decisions on the best available science
- Create an efficient and friendly marketplace, where every transaction is anticipated to result in a net benefit for the greater sage-grouse

# CONSERVATION CREDIT SYSTEM

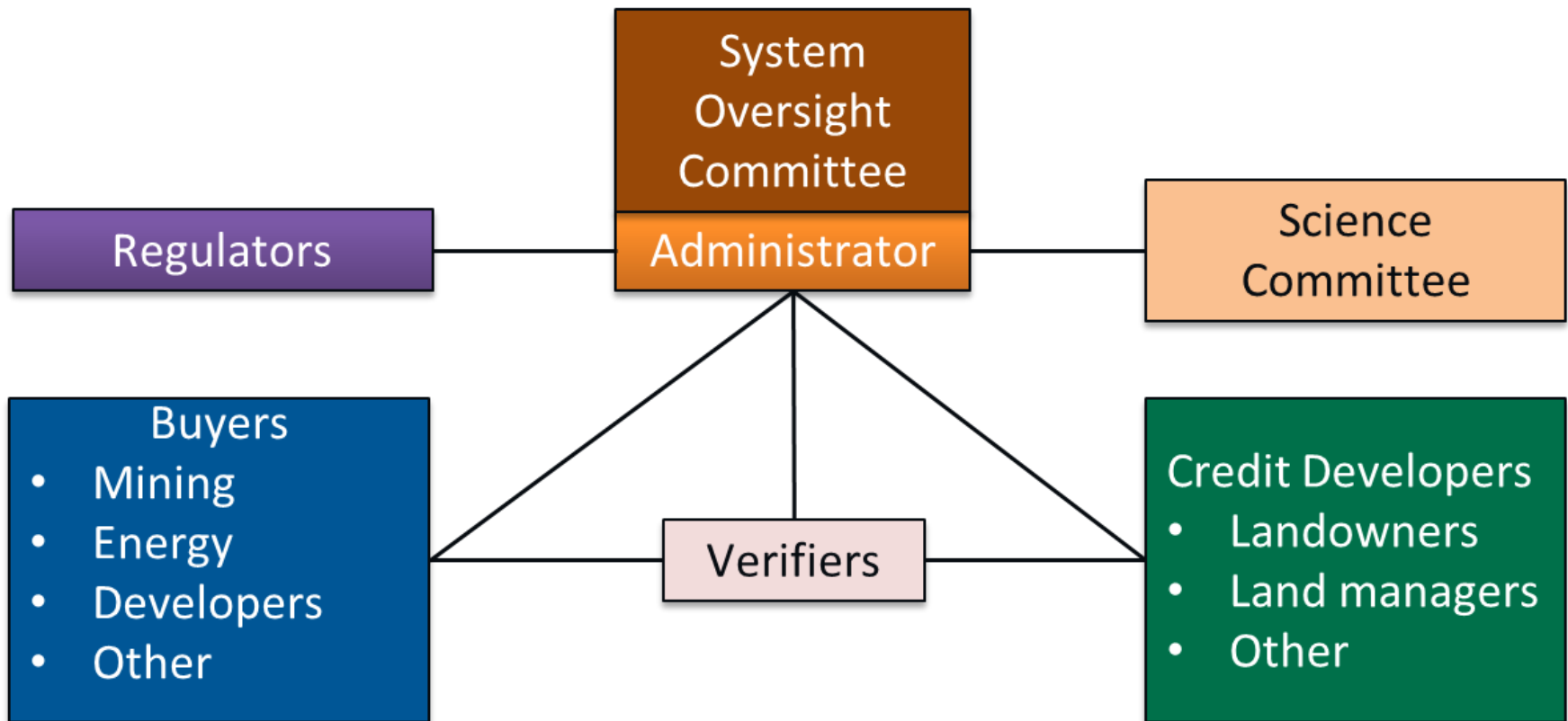
## SCOPE

- ✓ Anthropogenic impacts
- ✓ Benefits from offset project

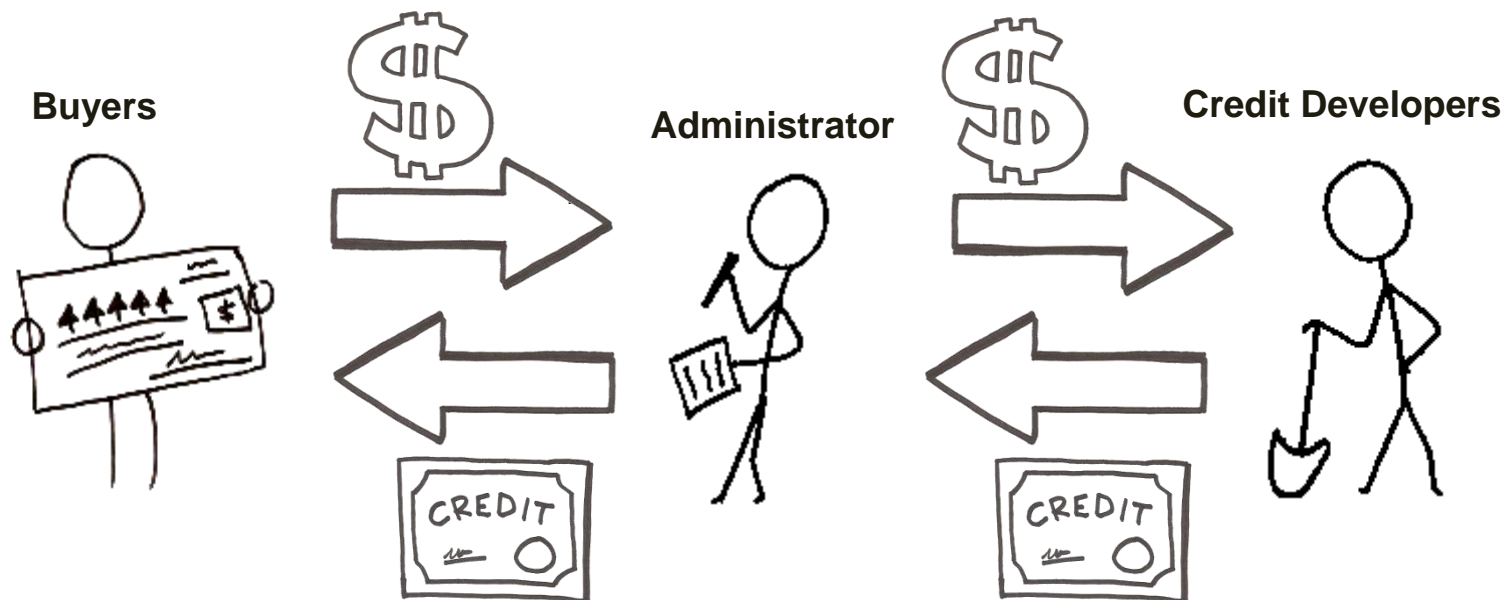
Potential  
future  
expansion of  
CCS

- ☐ Natural disturbances
- ☐ Non-mitigation habitat conservation programs
- ☐ Public land management actions
- ☐ Other sage-brush dependent species
- ☐ Overall ecosystem health

# ORGANIZATIONAL STRUCTURE & ROLES



# APPROACH

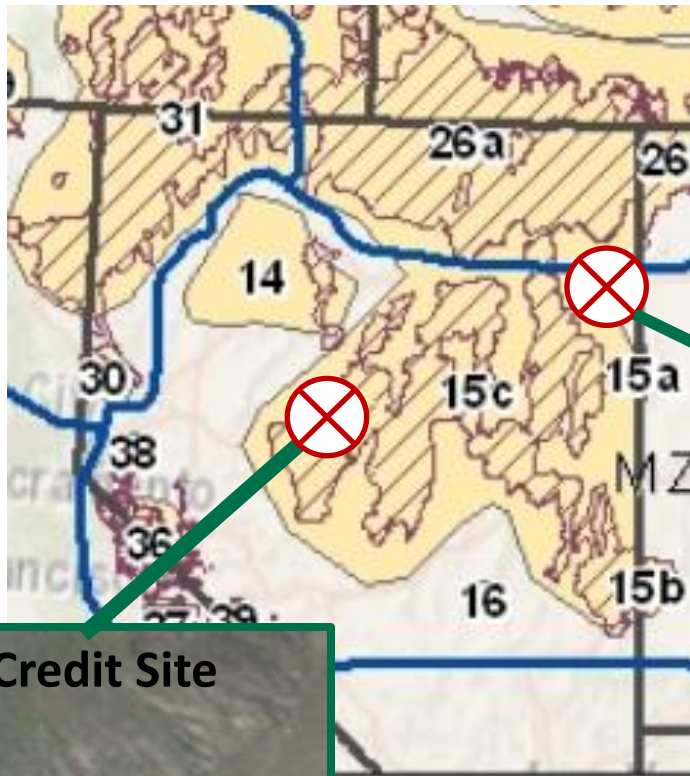






# EXAMPLE PROJECT SCENARIOS





**#1 Credit Site**

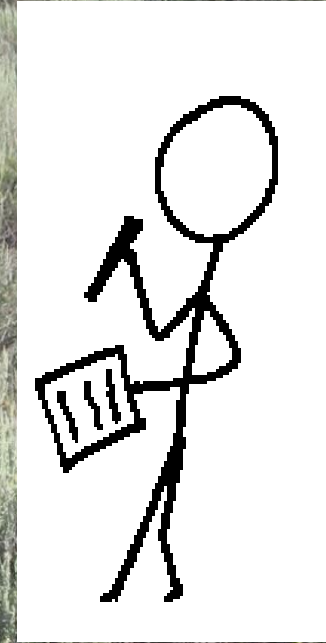
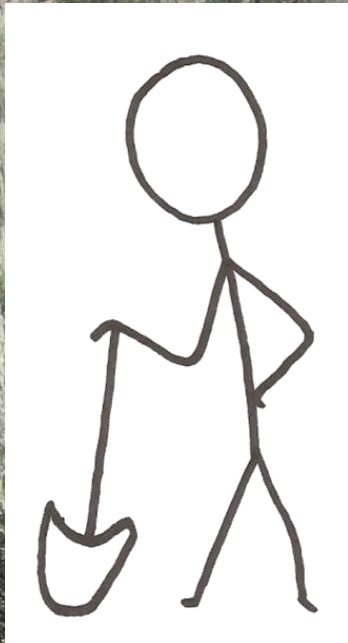


**#2 Debit Site**





# CREDIT SITE

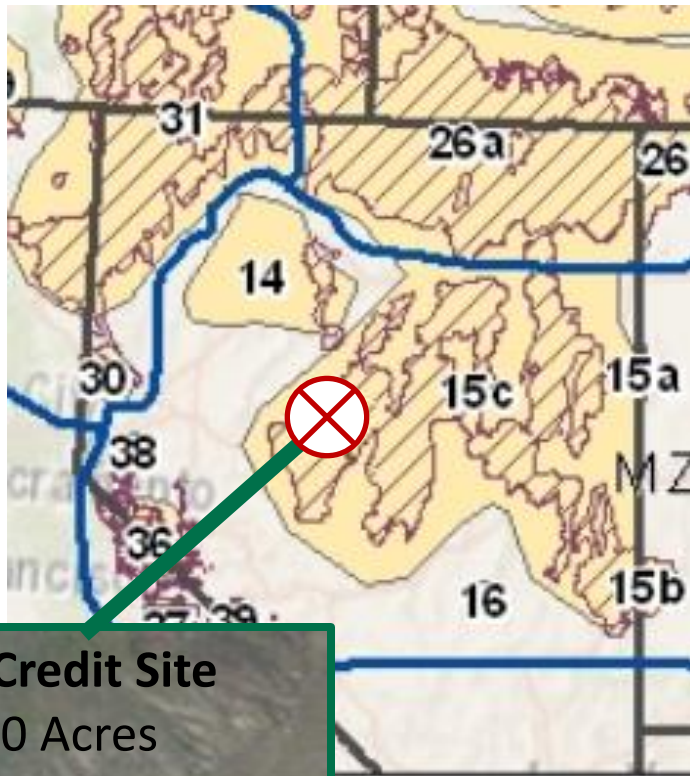


# SELECT & VALIDATE SITE



Determine if site is valid to participate in the Credit System





### #1 Credit Site

- 1,000 Acres
- Location
- Proposed Actions

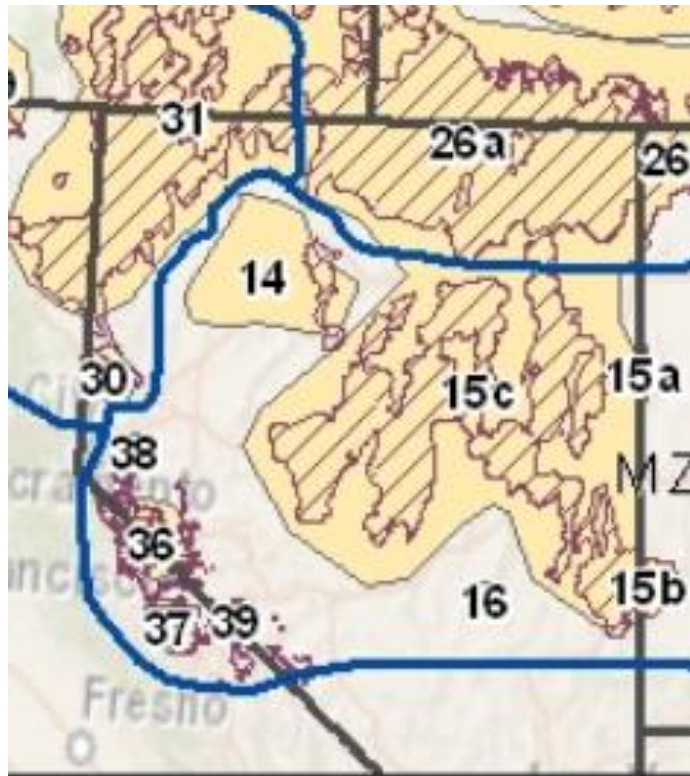
# SITE VALIDATION CONSIDERATIONS

**Service Areas** – Is Susan's ranch in a greater sage-grouse service area?

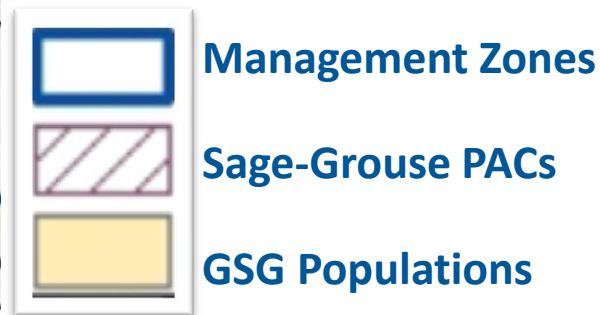


1	Dakotas	13b	Panguitch	29	Klamath
2	Northern Montana	13c	Bald Hills	30	Warm Springs Valley
3	Powder River Basin	14	Northwest Interior	31	Western Great Basin
4	Yellowstone Watershed	15a	Idapah	32a	Moses Coulee
5	Eagle-South Routt	15b	Hamlin Valley	32b	Crab Creek
6	Middle Park	15c	Southern Great Basin	33a	Yakama Indian Nation
7	Laramie	16	Quinn Canyon Range	33b	Yakima Training Center
8	Jackson Hole	17	Baker	34	Parachute-Piceance-Roan Basin
9a	Wyoming Basin	18	East Central	35	Meeker-White River
9b	Rich-Summit-Morgan	19-22	Southwest Montana	36	North Mono Lake
9c	Uintah	23	Snake-Salmon-Beaverhead	37	South Mono Lake
9d	North Park	24	Belt Mountains	38	Pine Nut
9e	NWCO	25	Weiser	39	White Mountains
10a	Strawberry Valley	26a	Northern Great Basin		
10b	Carbon	26b	Box Elder		
11	Sheeprock	27	Sawtooth		
12-13a	Parker Mountain-Emery	28	Central OR		

# SERVICE AREAS



**Service Area** is a mapped geographic sub-region with ecological, practical or jurisdictional significance where credits are tracked and reported.



# SITE VALIDATION CONSIDERATIONS

## **Other considerations to be reviewed by the Committee**

- Credit Producer Confidentiality
- Site Eligibility
- Stacking of public funding

# IMPLEMENT & CALCULATE CREDIT



- Develop management plan
- Calculate anticipated credits
- Submit documentation



1

**Conduct Pre-Field Visit  
Desktop  
Analysis**

- Digitize the project area
- Delineate map units based on vegetative structure



2 mi (3.2 km)

## Conduct Field Visit

- Confirm location of any anthropogenic structures
- Confirm map units and sampling protocol
- Collect field data using the datasheet



### EcoMetric SAGE GROUSE Attribute Measurements

Revised 07-01-13

Date: 07-06-13 Observers: AII

UTM E: 0256672

Site Name: Ayia CRP

UTM N: 4469498 13T NA083

Slope:

Aspect: 350°/1°

Camera / Photo #'s: TT

Site is ARID or MESIC (circle one)

### GRASS and FORB COVER (Small Plots)

Quad #	% Native GRASS Cover	% Invasive GRASS Cover	% BROTEC Cover	# of FORB Species in Quad	% Native or Desirable FORB Cover	% Invasive FORB Cover	Distance to Suitable Cover/Refugia
1	10-25	10-25	12"	0	2	62	0
2	10-25	10-25	12"	0	1	62	0
3	10-25	10-25	12"	0	1	62	0
4	10-25	10-25	9"	0	2	62	0
5	10-25	10-25	9"	0	1	62	0
6	0	25-50	11"	0	1	62	0
7	10-25	10-25	13"	0	1	62	0
8	0	25-50	12"	0	1	62	0
9	0	10-25	19"	0	2	62	0
10	25-50	25-50	12"	0	1	62	0

### SAGEBRUSH COVER (30m x 30m)

% Estimated Sagebrush Canopy Cover for Plot:

#	Sage Height	Columnar / Spreading	#	Sage Height	Columnar / Spreading	#	Sage Height	Columnar / Spreading
1			11			21		
2			12			22		
3			13			23		
4			14			24		
5			15			25		
6			16			26		
7			17			27		
8			18			28		
9			19			29		
10			20			30		



# 3

## Calculate Scores

- Enter data into calculator
- Calculate breeding, summer, and winter scores for each map unit
- Apply landscape scores/modifiers

## Collect Field Data



## Calculate Habitat Function

- Sagebrush height: xx cm
- Sagebrush canopy cover: xx%

EcoMetric  
SAGE GROUSE Attribute Measurements  
Revised 07-01-13

Date: 07-08-13 Observers: A/J UTM E: 0256672  
Site Name: Ayia CRP UTM N: 4469498 13T NA83  
Slope: Aspect: 350°/1°  
Camera / Photo #'s: TT Site is ARID or MESIC (circle one)

**GRASS and FORB COVER (Small Plots)**

Quad #	% Native GRASS Cover	% Invasive GRASS Cover	% BROTEC Cover	# of FORB Species in Quad	% Native or Desirable FORB Cover	% Invasive FORB Cover	Distance to Suitable Cover / Refugia
1	10-25	10-25	0	2	0	0	
2	10-25	10-25	0	1	0	0	
3	10-25	10-25	0	1	0	0	
4	10-25	10-25	0	2	0	0	
5	10-25	10-25	0	1	0	0	
6	0	25-50	0	1	0	0	
7	10-25	10-25	0	1	0	0	
8	0	25-50	0	1	0	0	
9	0	10-25	0	2	0	0	
10	25-50	25-50	0	1	0	0	

**SAGEBRUSH COVER (30m x 30m)**

% Estimated Sagebrush Canopy Cover for Plot:

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5			15			25		
6			16			26		
7			17			27		
8			18			28		
9			19			29		
10			20			30		

% Cover	<5	5-15	15-20	20-30	30-40	40-50	50-60
Performance	0	0.5	1	1	0.95	0.9	0.85
% Cover	60-70	70-80	80-90	>90			
Performance	0.6	0.5	0.5	0.5			







## **Ranch Project Summary**

- **1,000 Acres**
- **Conservation project to maintain 70% functionality**
- **20 year project**

# CREDIT CALCULATION CONSIDERATIONS

**Baseline** – What is the starting point for Susan to measure credits on her site?

# BASELINE CONSIDERATIONS

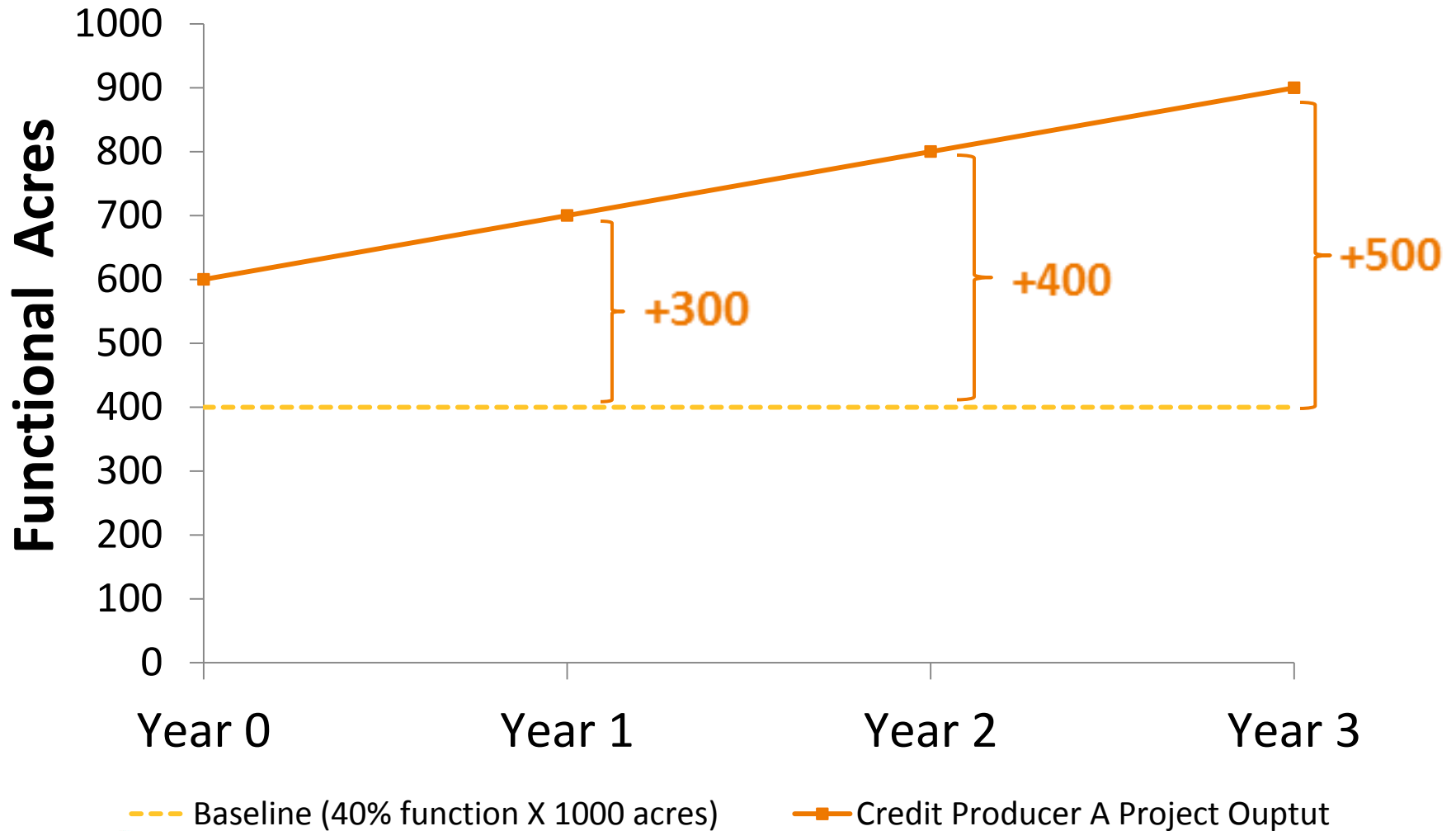
- Additionality
- Equity - reward preservation efforts
- Practicality



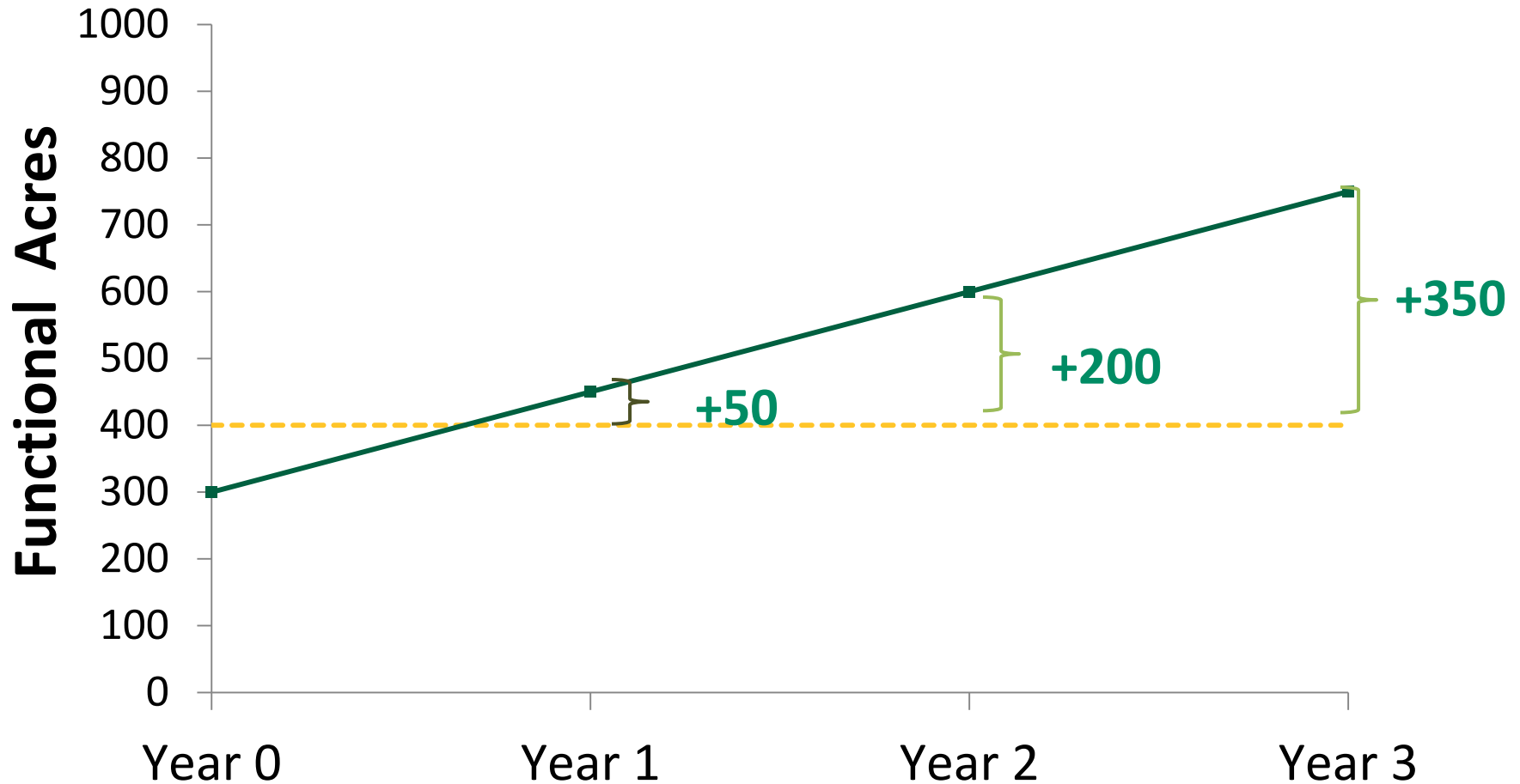
# BASELINE REGIONAL STANDARDS

- Standard baseline starting point associated to the region
- Actual functional acre credit score determined using Habitat Quantification Tool on site

# BASELINE REGIONAL STANDARDS



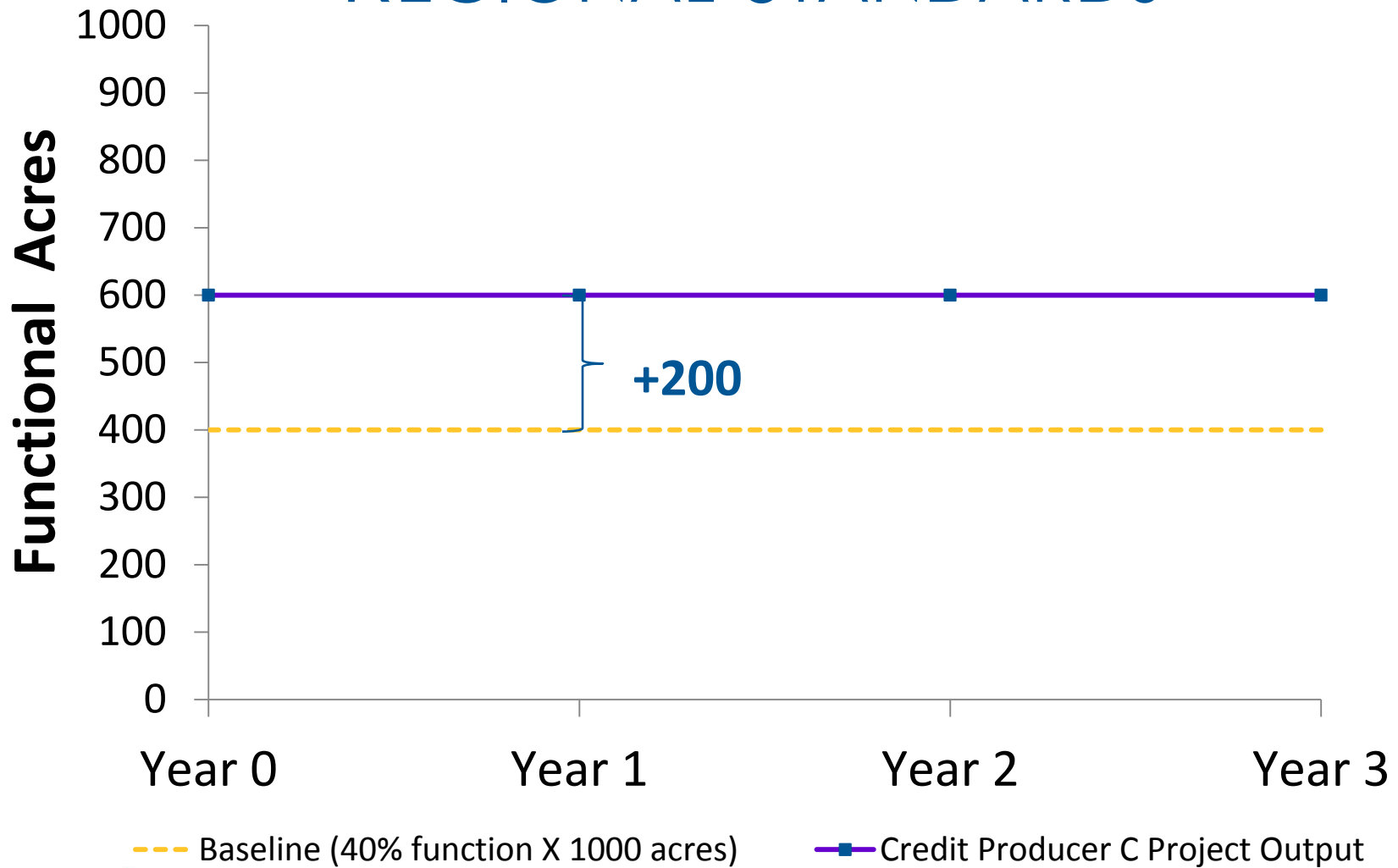
# BASELINE REGIONAL STANDARDS



--- Baseline (40% function X 1000 acres)

—■ Credit Producer B Project Output

# BASELINE REGIONAL STANDARDS





# CREDIT CALCULATION CONSIDERATIONS

## **Other considerations to be reviewed by the Committee**

- Credit Variability
- Project Life
- Performance & Financial Assurances

# VERIFY CONDITIONS



Third-party verification to confirm that credit calculations match actual on-the-ground conditions.



EcoMetric  
SAGE GROUP Attribute Measurements

Date: 07-01-13 Observers: A11  
Site Name: 13T NA083  
Slope: 350%  
Camera / Photo #s: T1  
UTM E: 0256672  
UTM N: 4469448  
Aspect: 350%  
Site: ARID or MESIC (circle one)

Revised 07-01-13

GRASS and FORB COVER (Small Plot)

Quad #	% Native Cover	% GRASS Cover	Grass Height	% FORB Cover	Species in Quad	% Native or Desirable FORB Cover	% Invasive FORB Cover	Distance to Suitable Cover / Refugia
1	10-25	10-25	12"	0	2	12	0	
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4	10-25	10-25	9"	0	2	12	0	
5	10-25	10-25	9"	0	1	12	0	
6	0	25-50	11"	0	1	12	0	
7	10-25	10-25	13"	0	1	12	0	
8	0	25-50	12"	0	1	12	0	
9	0	10-25	13"	0	2	12	0	
10	25-50	25-50	12"	0	1	12	0	

#### SAGEBRUSH COVER (30m x 30m)

% Estimated Sagebrush Canopy Cover for Plot:

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9			19			29		
10			20			30		



# CREDIT VERIFICATION CONSIDERATIONS

**Credit Verification** – How can the Administrator be sure that Susan took an accurate measurement of the habitat quality on-site?

# CREDIT VERIFICATION CONSIDERATIONS

- Before first credit release
- Before increases in credit
- Every 5<sup>th</sup> year
- Spot check and audit



# Ranch Project Summary

## 700 functional acres verified over the 20 year project





# CREDIT VERIFICATION CONSIDERATIONS

## **Other considerations to be reviewed by the Committee**

- Credit Variability
- Verification Selection & Training

# REGISTER & ISSUE



- Create a Registry Account
- Register Verified Credits
- Issue Credits



# Ranch Project Summary

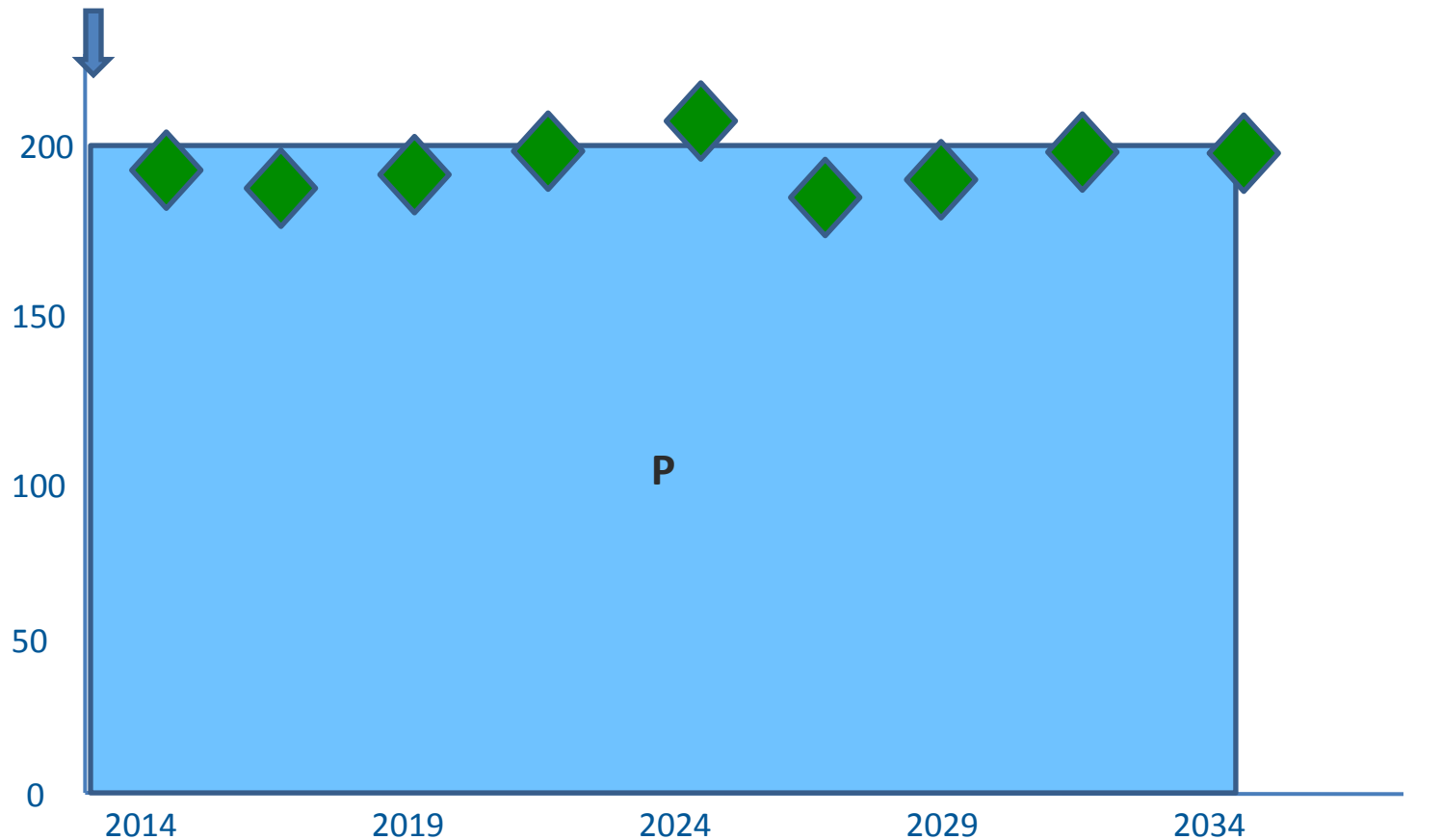
- 1,000 Acres
- Conservation project to maintain 70% functionality
- 20 year project



# REGISTRATION & ISSUANCE CONSIDERATIONS

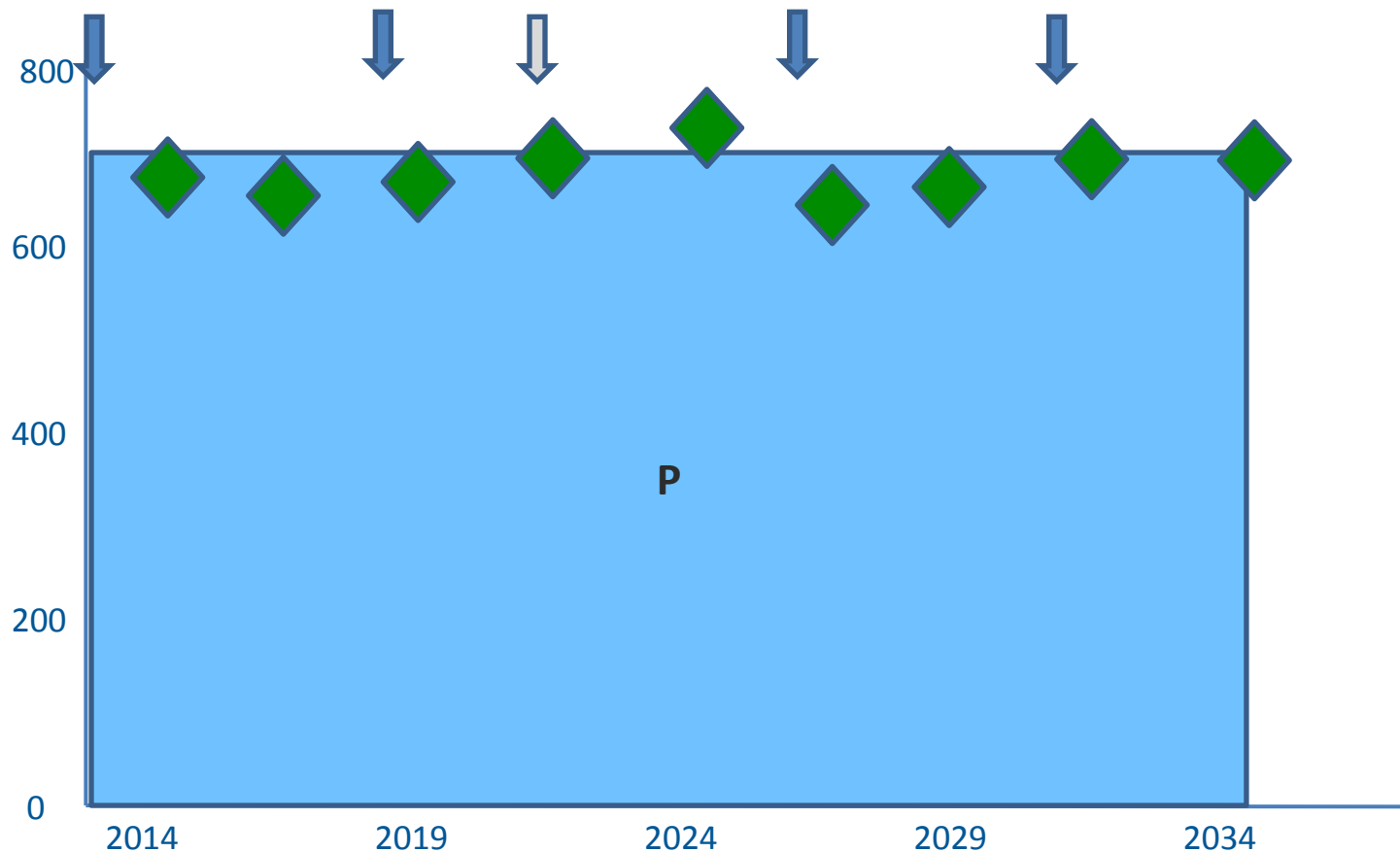
**Credit Release** – Now that Susan has verified the measurement on habitat quality on her ranch, how does she obtain the credits she has generated?

# CREDIT RELEASE PRESERVATION PROJECT EXAMPLE



Credits Released for Performance P  
On-the-Ground Benefit Generated ◆

# CREDIT RELEASE & ONGOING VERIFICATION



Verification  
Spot Checks & Audits



# CREDIT RELEASE

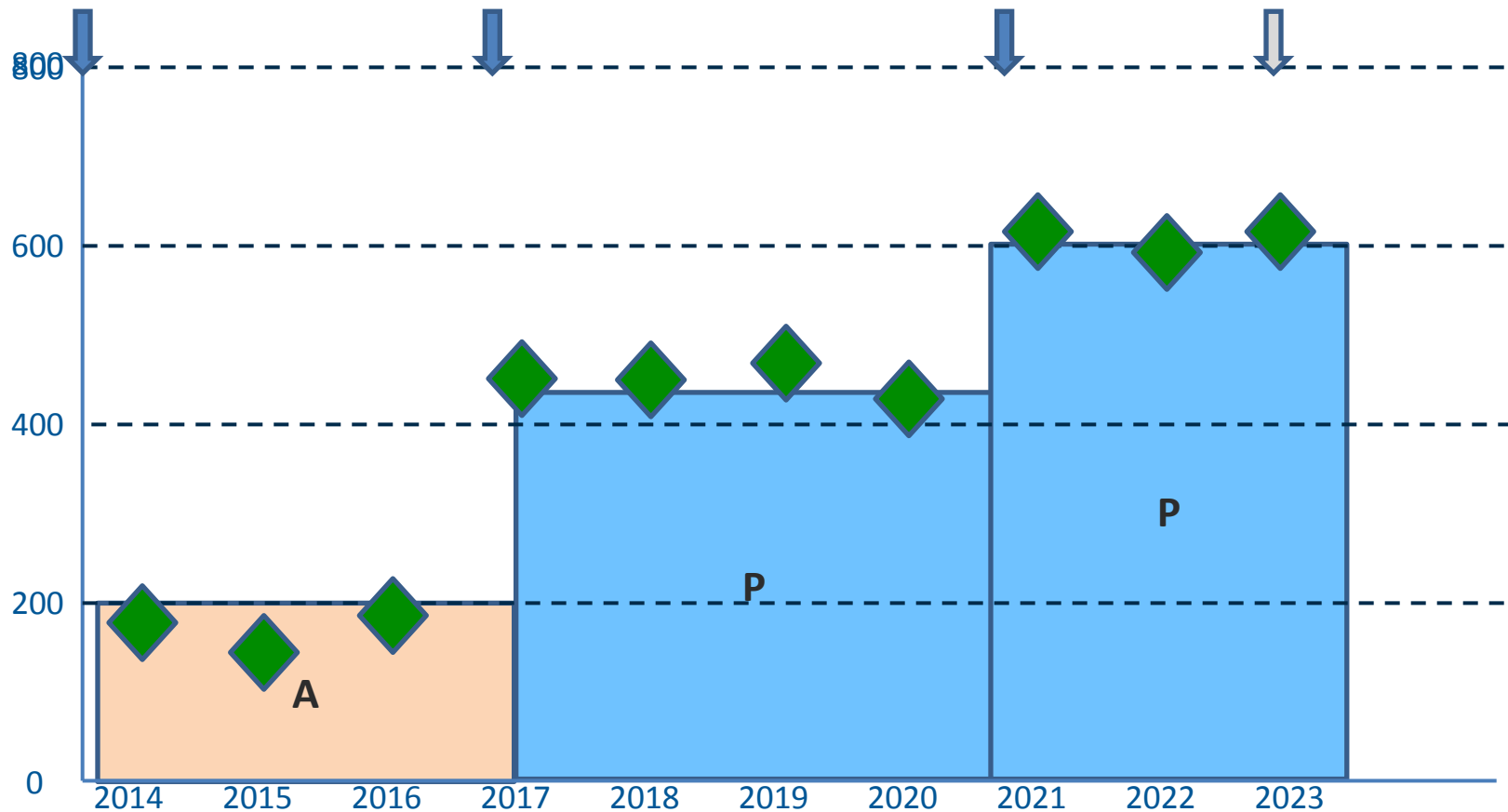
## RESTORATION PROJECT EXAMPLE

PERFORMANCE CRITERIA ACHIEVED	CREDITS RELEASED
<b>Milestone 1</b> <ul style="list-style-type: none"><li>- Action checked: pinyon-juniper trees, fences, and other vertical structures removed</li><li>- 1/3 of financial assurances secured</li></ul>	<b>33% of Total Anticipated Credits</b>
<b>Milestone 2</b> <ul style="list-style-type: none"><li>- 66% of expected HQT score at end of project</li><li>- 2/3 of financial assurances secured</li></ul>	<b>66% of Total Anticipated Credits</b>
<b>Milestone 3</b> <ul style="list-style-type: none"><li>- 100% of expected HQT score for the project</li><li>- All financial assurances secured</li></ul>	<b>100% of Total Anticipated Credits</b>



# CREDIT RELEASE

## RESTORATION PROJECT EXAMPLE



Verification  
Spot Checks & Audits

Credits Awarded for Actions **A**  
Credits Awarded for Performance **P**  
On-the-Ground Benefit Generated **◆**

# TRACK & TRANSFER



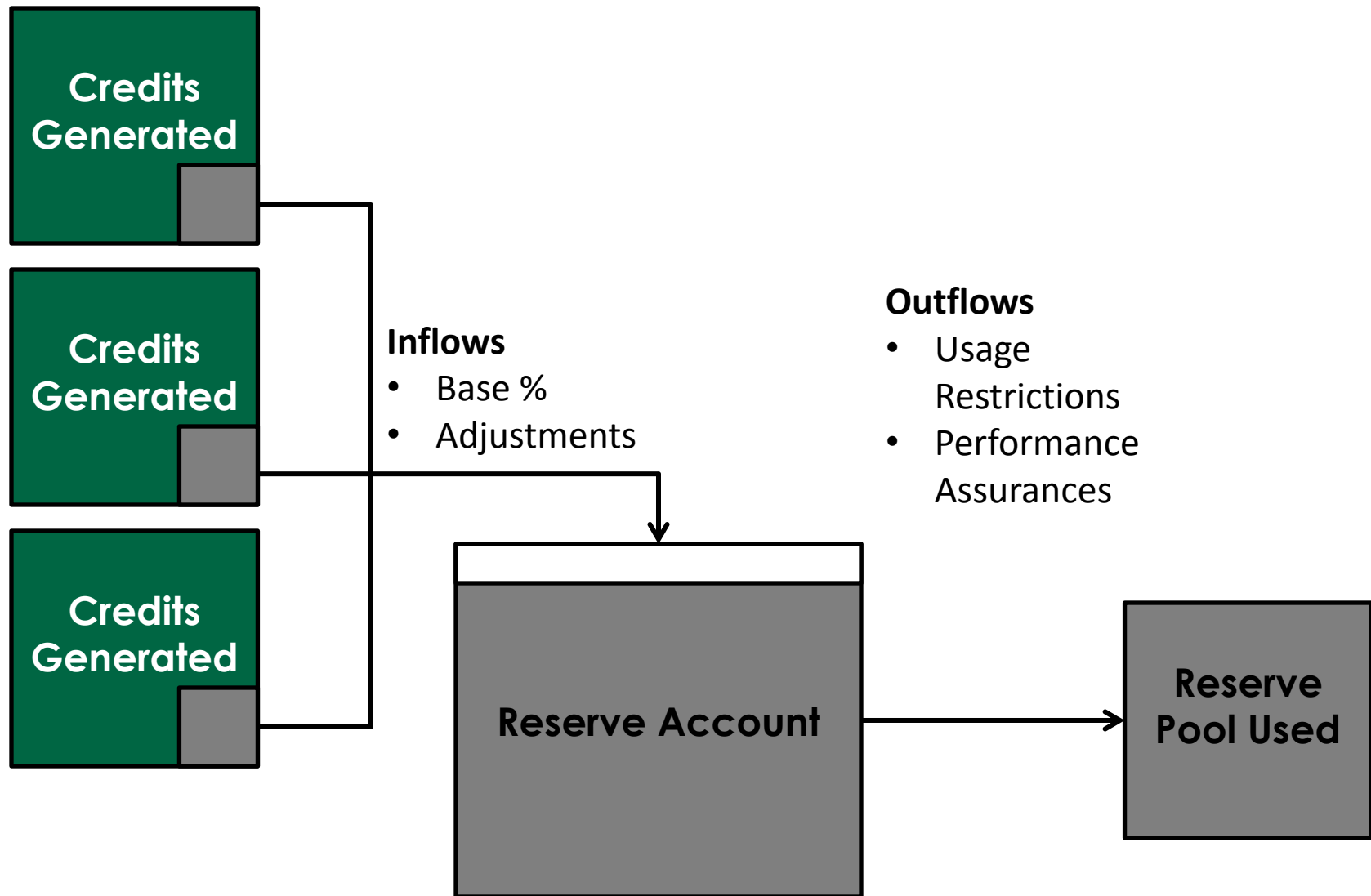
- Sell, Transfer or Retire Credits
- Report Accomplishments

# TRACK & TRANSFER CONSIDERATIONS

How many credits does Susan have to sell to a buyer?

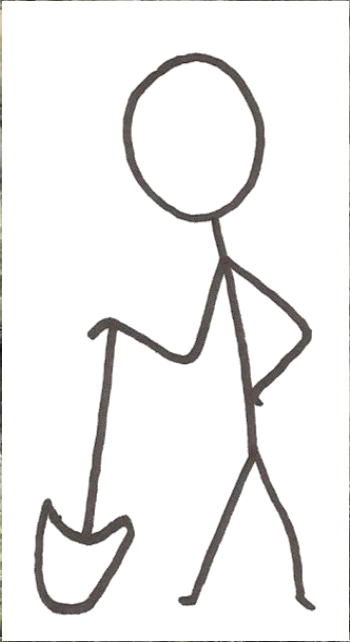
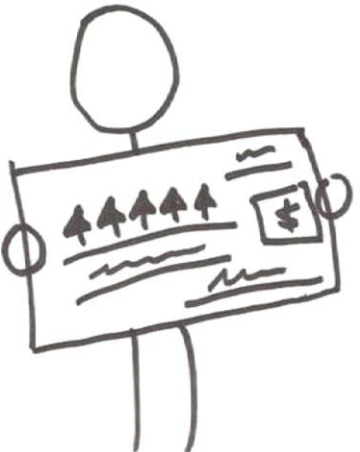
**Reserve Account** - How does the Administrator ensure that there are always more credits than debits in the program?

# RESERVE ACCOUNT

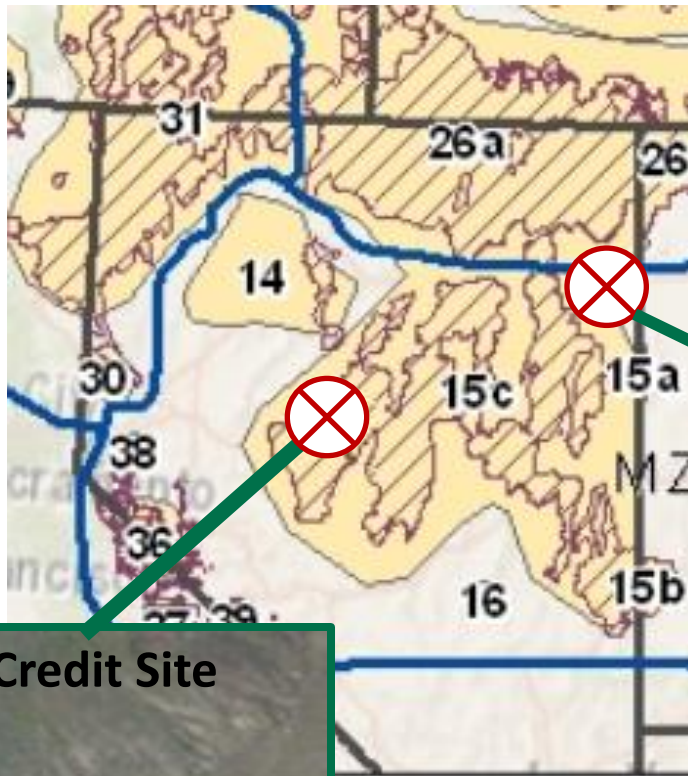




**Reserve Account  
(70 Credits)**







**#1 Credit Site**

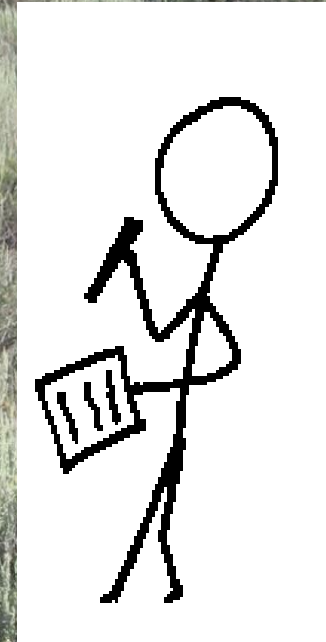


**#2 Debit Site**





## #2. DEBIT SITE



# INDICATE INTEREST



Contact Administrator to provide basic information



# DETERMINE CREDIT NEED



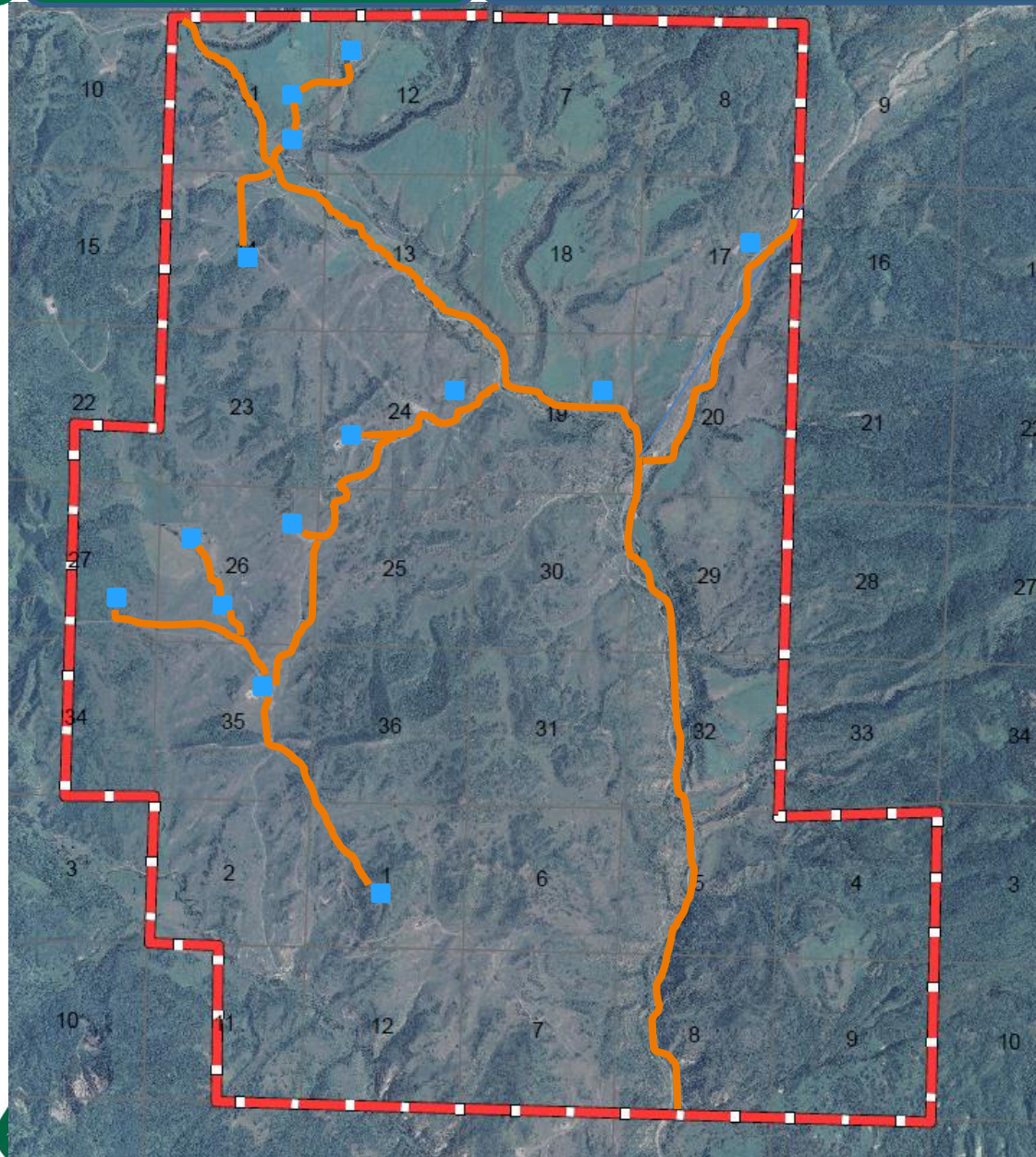
- Develop project plan
- Calculate anticipated debits
- Submit documentation



# 1

## Conduct Pre-Field Visit Desktop Analysis

- Digitize the project area
- Draw avoidance distances
- Delineate map units based



### Pre-Project

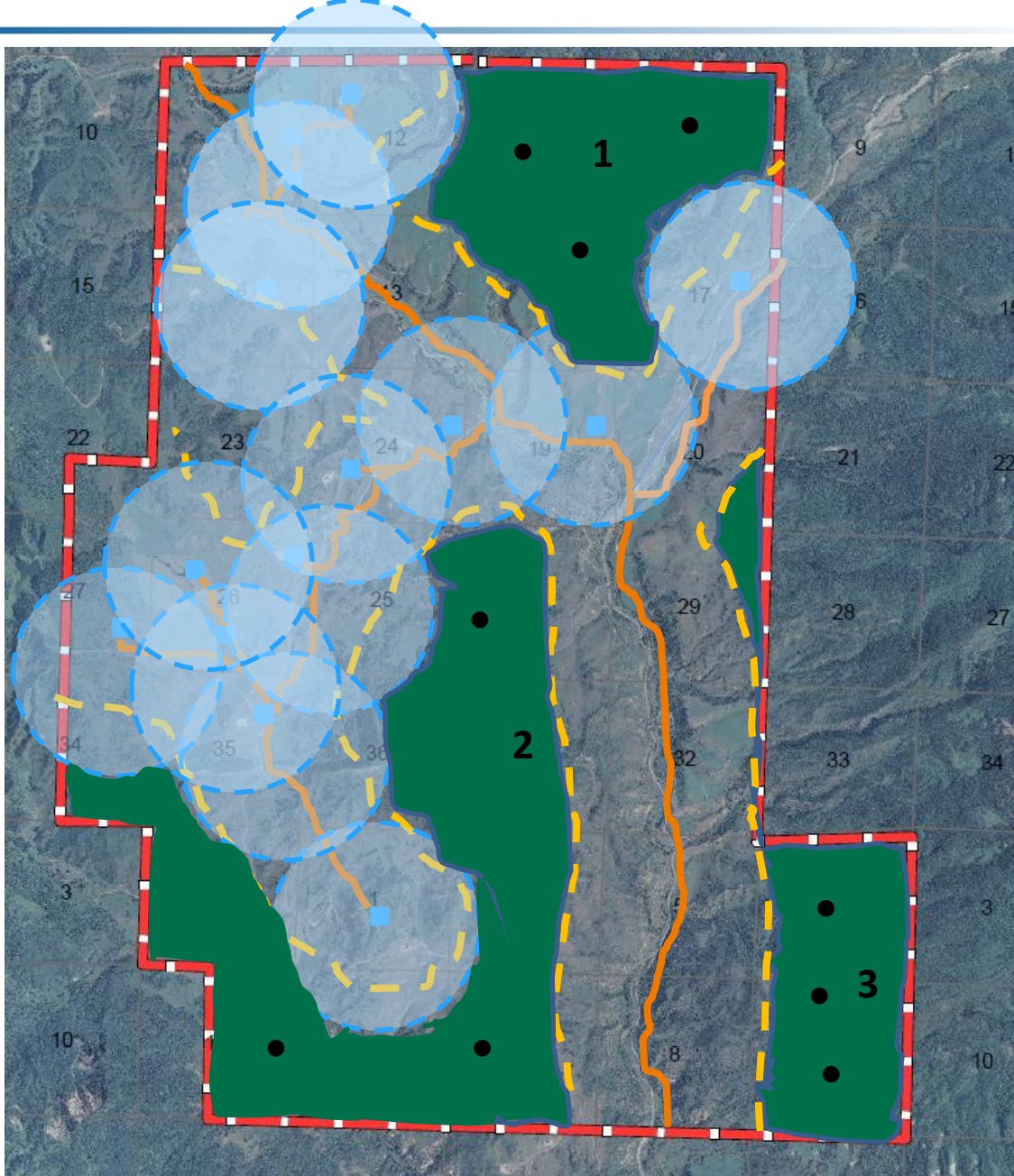
- 1,000 acre site
- Infill well development

### KEY

- Existing Roads
- Existing Well Pads/  
Producing Wells

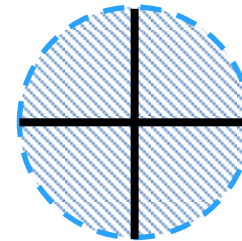
1 mi (1.6 km)





## Pre-Project w/ Well Buffers

- 1,000 acre site
- Infill gas well development



### KEY

- Existing Roads
- Road Buffers
- Existing Well Pads/  
Producing Wells
- Well pad buffers
- # Map Units

# 2

## Conduct Field Visit

- Confirm location of any anthropogenic structures
- Confirm map units and sampling protocol
- Collect field data using the datasheet



### EcoMetrix SAGE GROUSE Attribute Measurements

Revised 07-01-13

Date: 07-06-13 Observers: AII

UTM E: 0256672

Site Name: Ayia CRP

UTM N: 4469498 13T NA083

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Aspect: 350°/1°

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### SAGEBRUSH COVER (30m x 30m)

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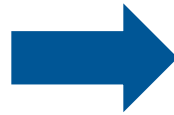


# 3

## Calculate Debits

- Enter data into calculator
- Calculate breeding, summer, and winter scores for each map unit

## Collect Field Data



- Sagebrush height: xx cm
- Sagebrush canopy cover: xx%

## Calculate Change in Habitat Function

*Handwritten notes: value personal, 2012-2013*

EcoMetric  
SAGE GROUSE Attribute Measurements  
Revised 07-01-13

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Site Name: Ayia CRP UTM N: 4469498 13T NA83  
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Performance	0	0.5	1	1	0.95	0.9	0.85
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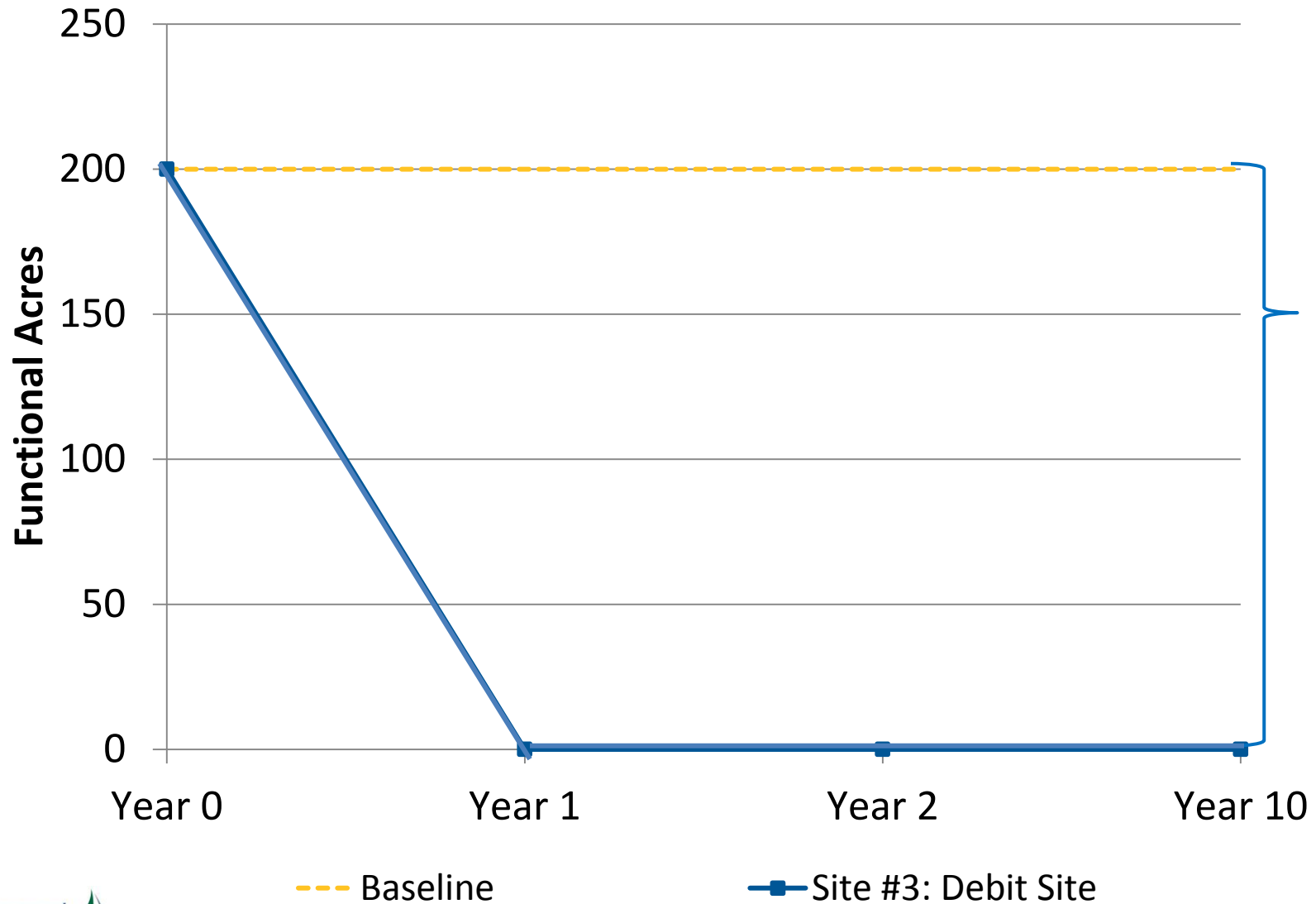
# Debit Project Summary

- 1,000 Acres
- Impact project that reduces 20% habitat quality to 0% function post-project
- Low priority habitat area
- 20 year project

# DEBIT CALCULATION CONSIDERATIONS

**Baseline** – What is the starting point for Energy Company X to measure credits needed to offset their impact?

# DEBIT BASELINE PRE-PROJECT CONDITION





# DEBIT CALCULATION CONSIDERATIONS

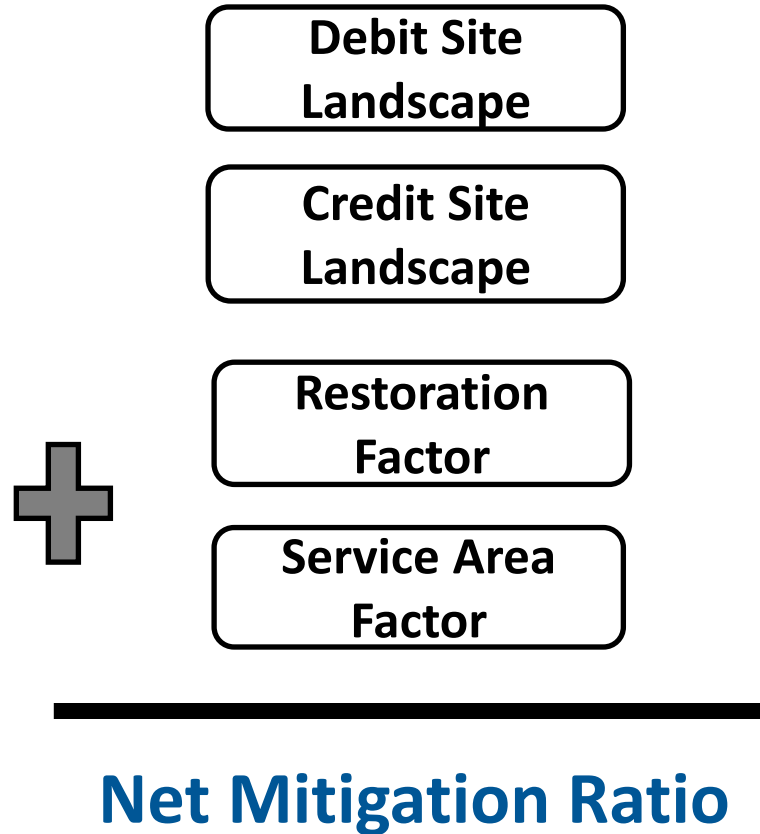
**Mitigation Ratios** – How can the Administrator be sure that there are never less credits than debits under the program?



# MITIGATION RATIOS

$$\begin{array}{|c|} \hline \text{Debits} \\ \hline \text{(\# Functional} \\ \hline \text{acres lost)} \\ \hline \end{array} \times \text{Net Mitigation Ratio} = \begin{array}{|c|} \hline \text{Credit} \\ \hline \text{Obligation} \\ \hline \end{array}$$

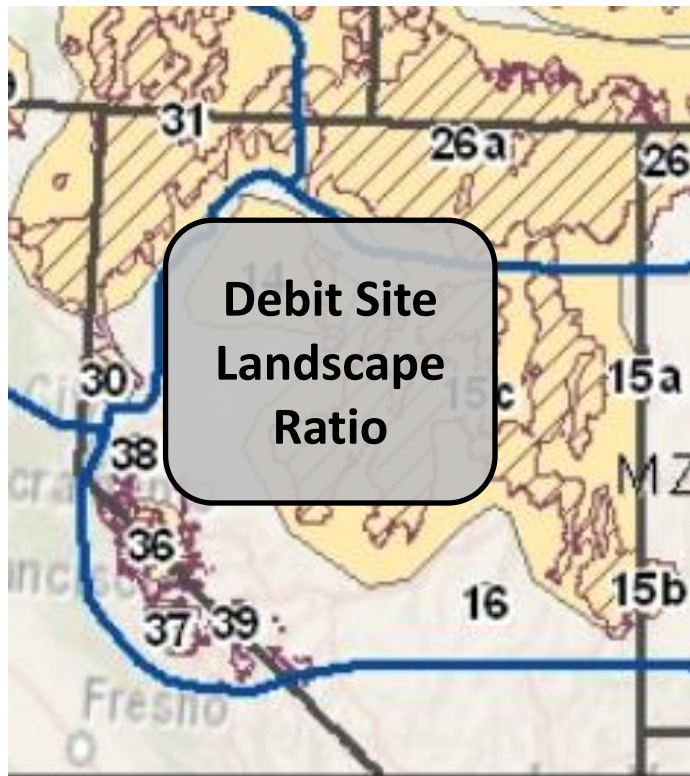
# MITIGATION RATIOS



# MITIGATION RATIOS

## DEBIT SITE LANDSCAPE RATIO

Where is the debit site located?



Ratio based on priority level for conservation & recovery

=

Very High

High

Medium

Low

# DEBIT CALCULATION CONSIDERATIONS

## **Other considerations to be reviewed by the Committee**

- Debit Variability
- Project Life
- Regulatory Assurances



# ACQUIRE CREDITS



- Create Registry account
- Calculate anticipated debits
- Submit documentation



EcoMetric  
SAGE GROUP Attribute Measurements

Date: 07-01-13 Observers: A11  
Site Name: 13T NA083  
Slope: 350%1°  
Camera / Photo #s: T1  
Site: ARID or MESIC (circle one)

Revised 07-01-13

UTM E: 0256672  
UTM N: 4469448

GRASS and FORB COVER (Small Plot)

Quad #	% Native Grass Cover	% GRASS Cover	Grass Height	% Native FORB Cover	Species in Quad	% Native or Desirable FORB Cover	% Invasive FORB Cover	Distance to Suitable Cover / Refugia
1	10-25	10-25	12"	0	2	12	0	
2	10-25	10-25	12"	0	1	12	0	
3	10-25	10-25	12"	0	1	12	0	
4	10-25	10-25	9"	0	2	12	0	
5	10-25	10-25	9"	0	1	12	0	
6	0	25-50	11"	0	1	12	0	
7	10-25	10-25	13"	0	1	12	0	
8	0	25-50	12"	0	1	12	0	
9	0	10-25	13"	0	2	12	0	
10	25-50	25-50	12"	0	1	12	0	

#### SAGEBRUSH COVER (30m x 30m)

% Estimated Sagebrush Canopy Cover for Plot:

#	Sage Height	Columnar / Spreading	#	Sage Height	Columnar / Spreading	#	Sage Height	Columnar / Spreading
1			11			21		
2			12			22		
3			13			23		
4			14			24		
5			15			25		
6			16			26		
7			17			27		
8			18			28		
9			19			29		
10			20			30		



# ACQUIRE CREDITS CONSIDERATIONS

**Debit Verification** – How can the Administrator be sure that Energy Company X took an accurate measurement of the change in habitat quality on-site?

# DEBIT VERIFICATION

1. Before debit project begins
2. During project implementation period
3. When debits end or decrease
4. Periodic spot checks and audits

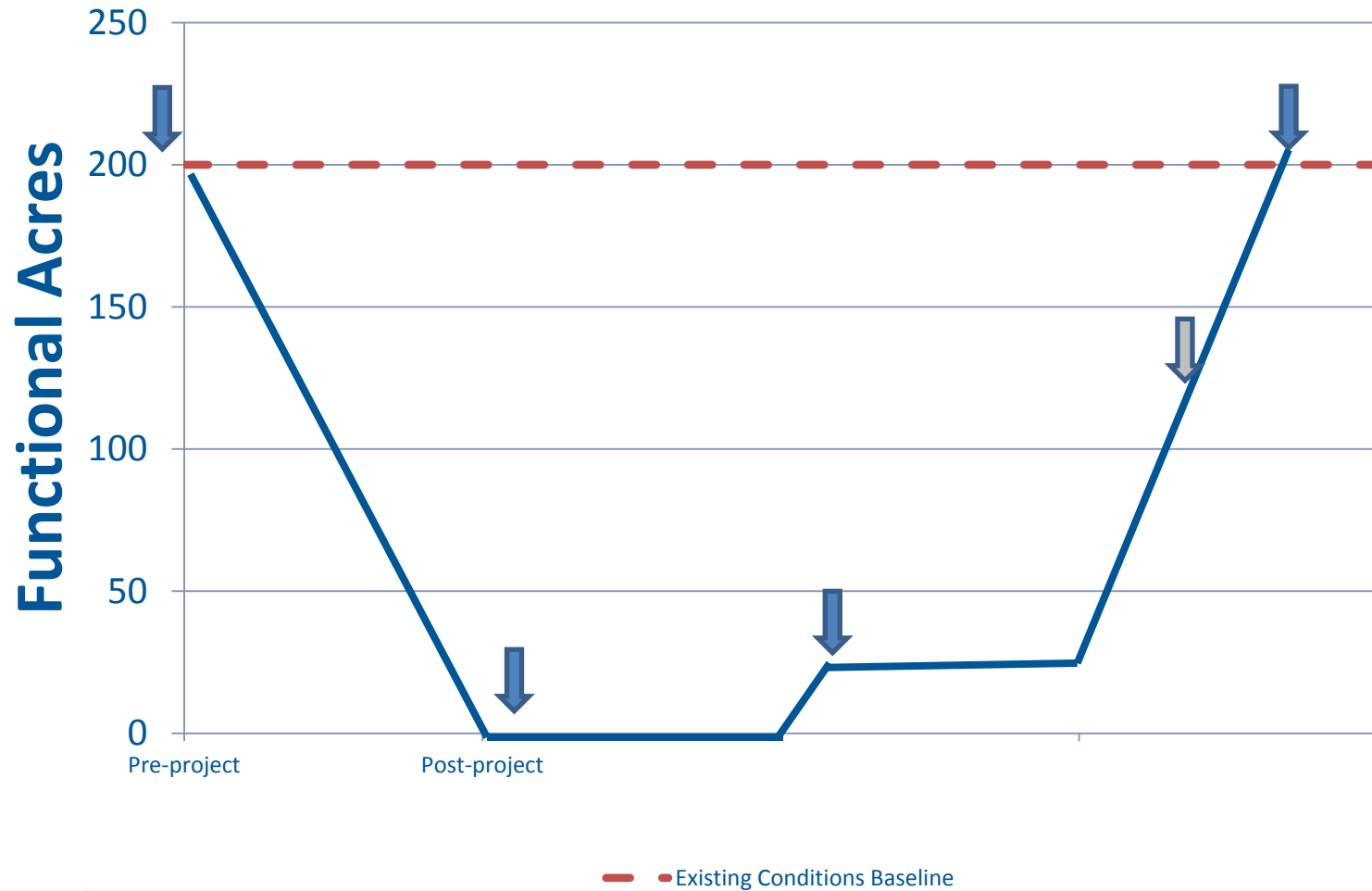


# DEBIT VERIFICATION

Verification



Spot Checks & Audits



# TRACK & TRANSFER



- Purchase Credits
- Report Accomplishments