



Nevada Credit System Transaction Overview

SEC Workshop – December 3, 2014

Wed. & Thurs. Goal & Objectives

Goal: Adopt initial version of the Conservation Credit System Manual and HQT

Wednesday (12/3) Objectives

- 1) Address gaps of understanding related to operational steps and proposed policy and technical elements
- 2) Identify proposed policies to discuss possible changes on Thursday

Thursday (12/4) Objectives

- 1) Define changes required for SEC to be comfortable adopting initial versions of the Manual and HQT

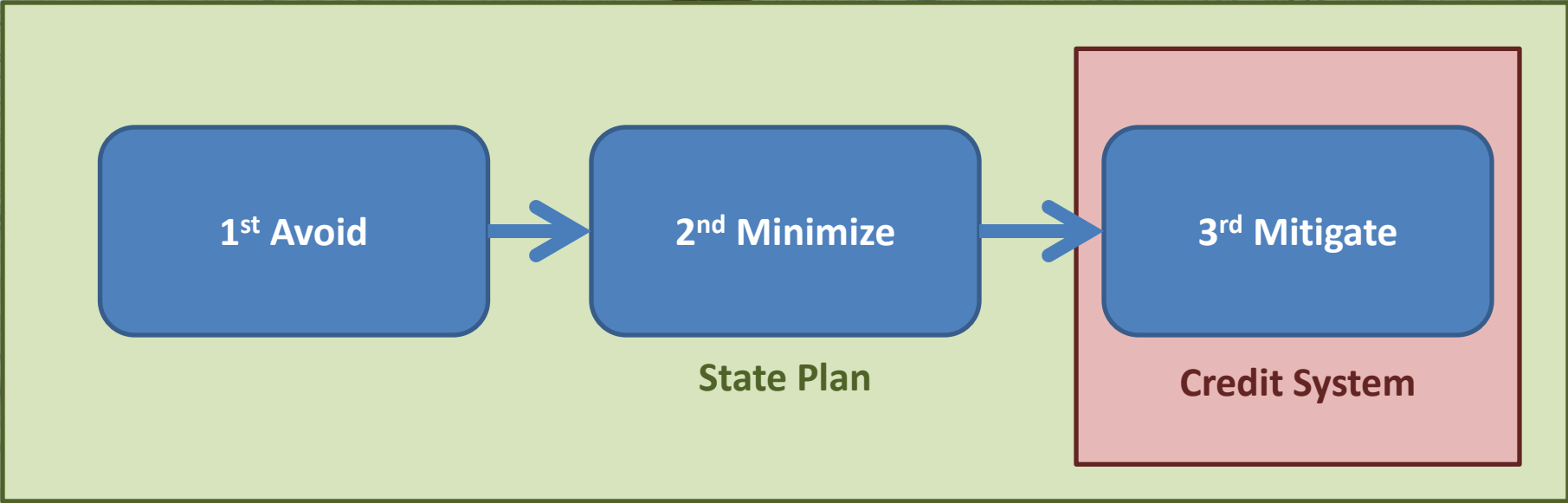
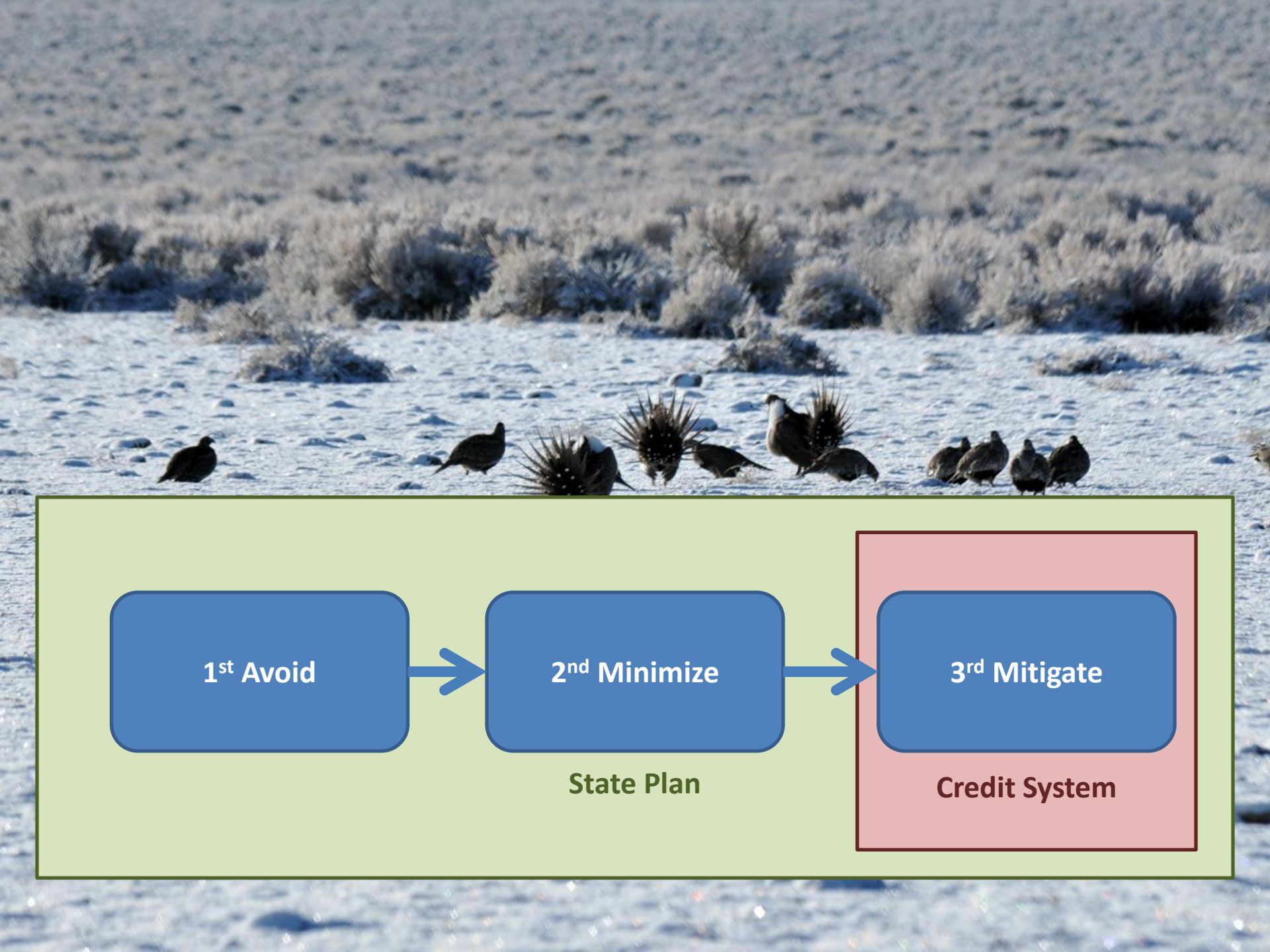
Roles

Participants:

- SEC
- SETT, State and Federal Agency staff, and other interested stakeholders

Facilitator: Jeremy

Technical Presenters/Note Takers: Eoin & Erik



AVOID

Proposed anthropogenic disturbances within the SGMA trigger timely consultation with the SETT



SEP Management Categories (August 2014)¹

-  Core
-  Priority
-  General
-  Non-Habitat



Figure 4. Management Category Map

Table 3-1. The "Avoid Process" for Proposed Anthropogenic Disturbances within the SGMA

Anthropogenic disturbances should be avoided in habitat within the SGMA. If project proponents wish to demonstrate that a disturbance cannot be avoided, exemptions will be granted if the criteria listed in the table can be met for the applicable management category.

Management Category	Core ("best of the best")	Priority	General	Non-habitat
Required Avoid Criteria	<ul style="list-style-type: none"> • Demonstrate that the project cannot be reasonably accomplished elsewhere – the purpose and need of the project could not be accomplished in an alternative location; • Demonstrate that the individual and cumulative impacts of the project would not result in habitat fragmentation or other impacts that would cause sage-grouse populations to decline through consultation with the SETT; • Demonstrate that sage-grouse population trends within the PMU are stable or increasing over a ten-year rolling average; • Demonstrate that project infrastructure will be co-located with existing disturbances to the greatest extent possible; • Develop Site Specific Consultation Based Design Features to minimize impacts through consultation with the SETT; and • Mitigate unavoidable impacts through compensatory mitigation via the Conservation Credit System. Mitigation rates will be higher for disturbances within this category. 	<ul style="list-style-type: none"> • Demonstrate that the project cannot be reasonably accomplished elsewhere – the purpose and need of the project could not be accomplished in an alternative location; • Demonstrate that project infrastructure will be co-located with existing disturbances to the greatest extent possible. If co-location is not possible, siting should reduce individual and cumulative impact to sage-grouse and their habitat; • Demonstrate that the project should not result in unnecessary and undue habitat fragmentation that may cause declines in sage-grouse populations within the PMU through consultation with the SETT; • Develop Site Specific Consultation Based Design Features to minimize impacts through consultation with the SETT; and • Mitigate for unavoidable impacts through compensatory mitigation via the Conservation Credit System. 	<ul style="list-style-type: none"> • Demonstrate that the project cannot be reasonably accomplished elsewhere – the purpose and need of the project could not be accomplished in an alternative location; • Demonstrate that project infrastructure will be co-located with existing disturbances to the greatest extent possible; • Develop Site Specific Consultation Based Design Features to minimize impacts through consultation with the SETT; and • Mitigate for unavoidable impacts through compensatory mitigation via the Conservation Credit System. 	<ul style="list-style-type: none"> • Demonstrate that the project will not have indirect impacts to sage-grouse and their habitat . If it cannot be demonstrated, the project proponent will be required to develop Site Specific Consultation Based Design Features to minimize impacts and compensatory mitigation will be required.

SETT will seek to relocate disturbances (direct and indirect) outside sage-grouse habitats. If some or all cannot be relocated then:



MINIMIZE

Impacts will be minimized by modifying proposed actions or developing permit conditions to include measures that lessen the adverse effect to sage-grouse and their habitats.



Site Specific Consultation Based
Design Features (Appendix A)

- Reduce disturbance footprint
 - Seasonal use limitations
 - Co-location with existing disturbances
- Residual adverse effects will require mitigation



MITIGATE

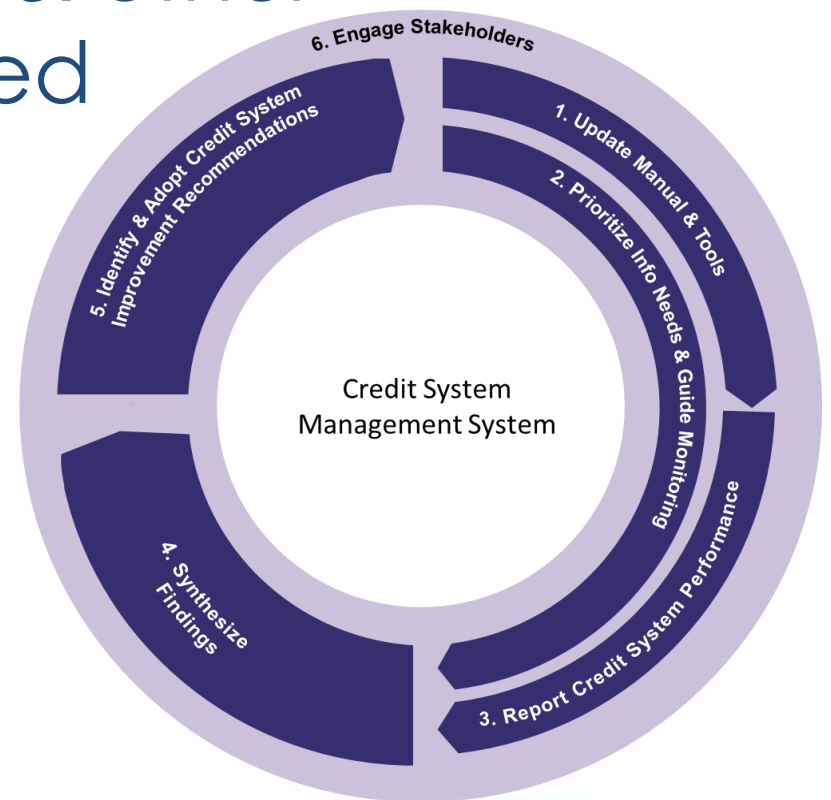
The successful stewardship and restoration of sage-grouse habitats designed to create a net benefit of sage-grouse habitats in Nevada and offset un-avoidable negative impacts from anthropogenic disturbances.



NEVADA CONSERVATION CREDIT SYSTEM

Adaptive Management

- Systematic process and decision making with triggers
- Science Committee & other stakeholders engaged
- Annual (or shorter)



EXAMPLE TRANSACTION OVERVIEW

Operational Steps

Credit Generation on
pages 55-63 of the Manual

Credit Acquisition on
pages 64-68 of the Manual



- **Policy and technical requirements** in Section 2 of the Manual
- **Habitat quantification guidance and calculation** using User's Guide and Calculator

Example Projects

Sage Grouse Population Management Units (PMUs)

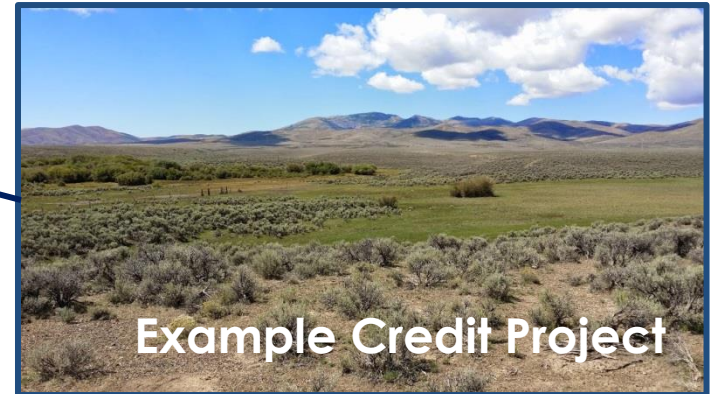
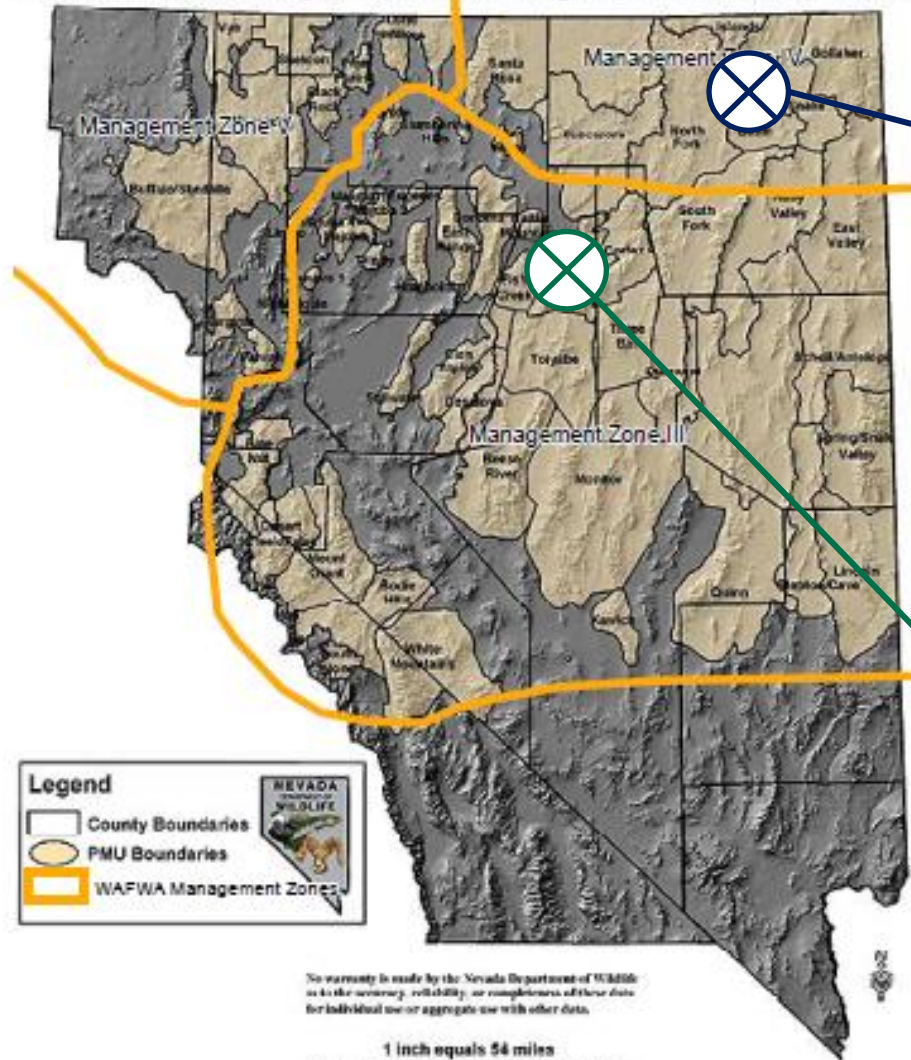
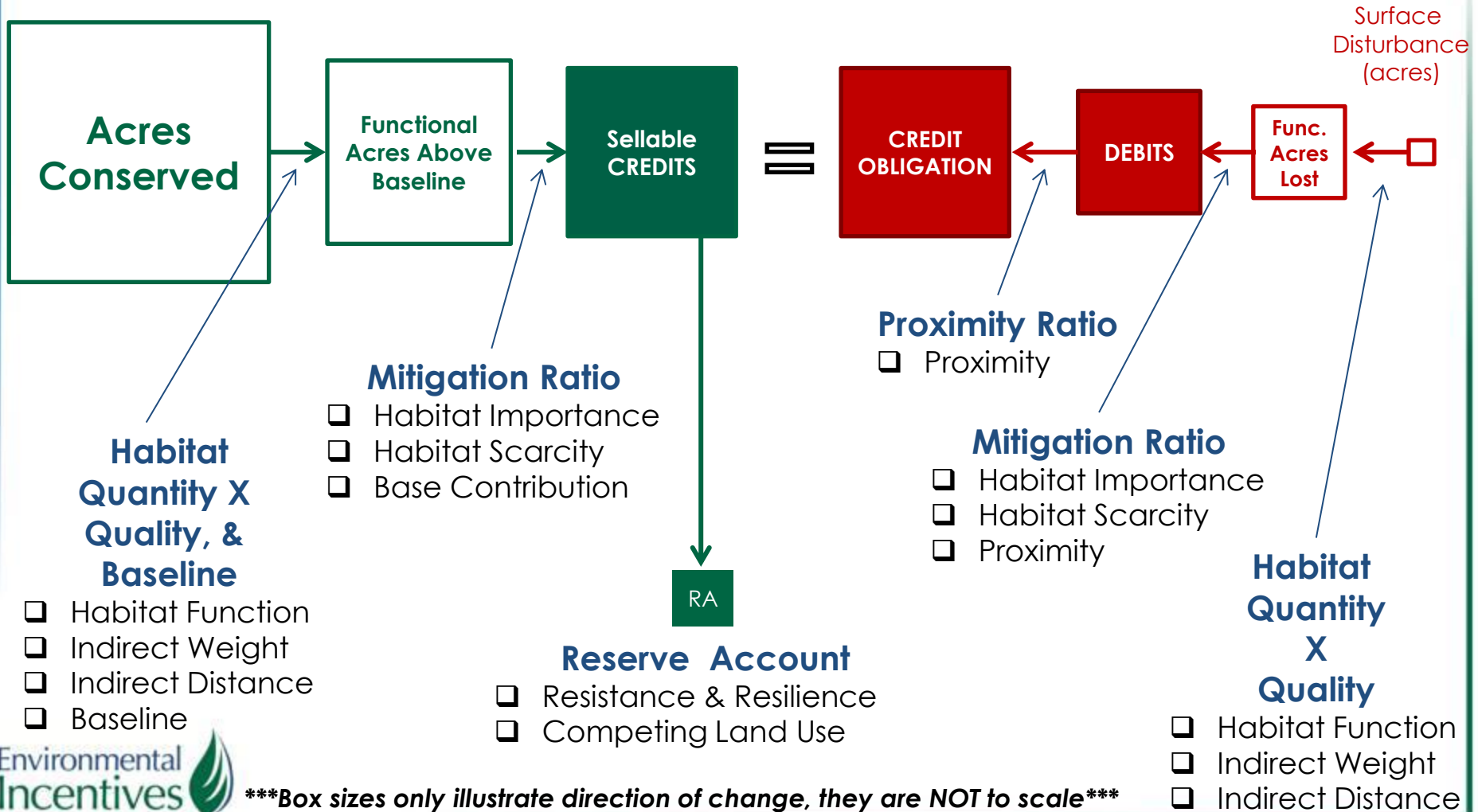


Figure 3. Population Management Unit locations and boundaries in the Nevada-California Plate Area

Example Transaction



EXAMPLE TRANSACTION

Example Transaction Sequence

#1 Credit Generation

#2 Credit Acquisition

Select &
Validate
Site

Implement
& Calculate
Credit

Verify
Conditions

Register &
Issue

Track &
Transfer

Acquire
Credits

Determine
Credit Need

Indicate
Interest

Credit Project Overview

- Project consists of stewardship of 3,460 acres with enhancement of approximately 60 acres of LBR habitat
- Committed to maintaining performance standard for 30 years





- Determine if site is eligible to participate in the Credit System
- Submit project Validation Checklist
- Receive project Notice of Validation

Validation Checklist Eligibility Requirements

- ✓ Service Area
- ✓ Ownership & Stewardship
- ✓ Additionality
- ✓ No Imminent Threat



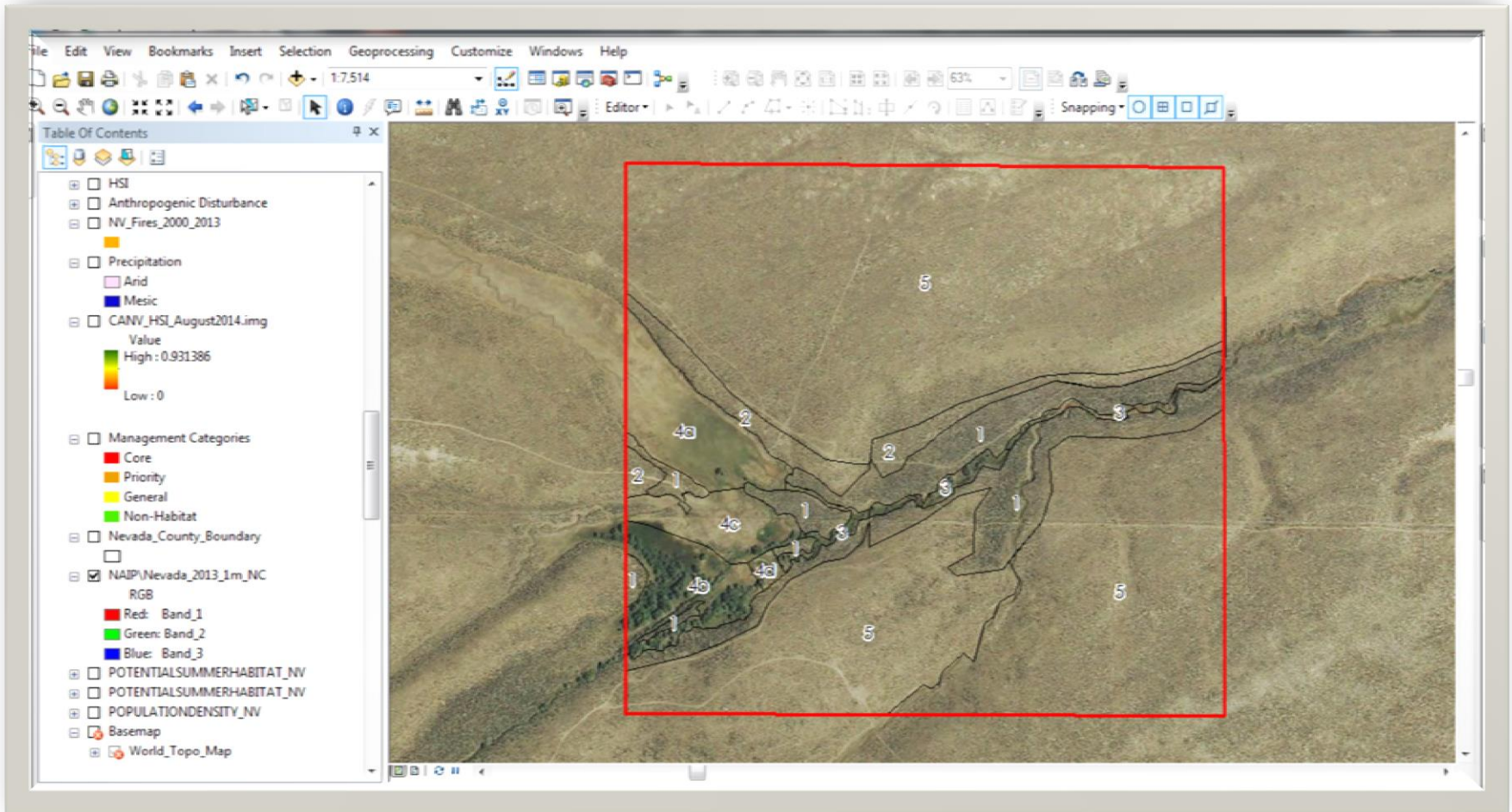


- Calculate estimated credits
- Develop Management Plan & Credit Release Schedule
- Secure financial assurances
- Submit documentation to Administrator
- Establish Verification Contract
- Sign Participant Contract
- Implement project

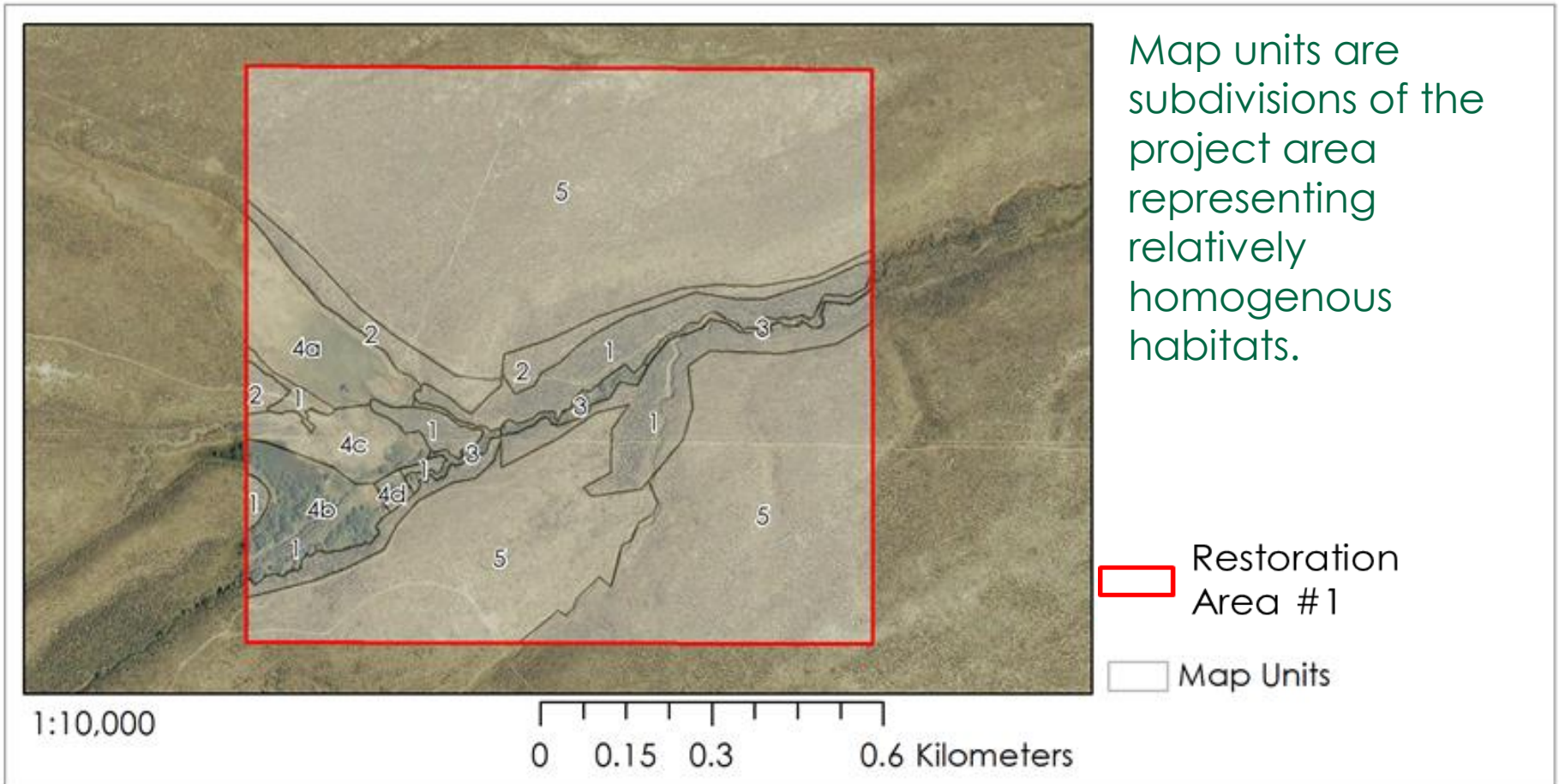
1

Conduct Pre-Field Visit Desktop Analysis

- Digitize the project area & map units
- Measure landscape scale attributes
- Measure local scale attributes



Map Units

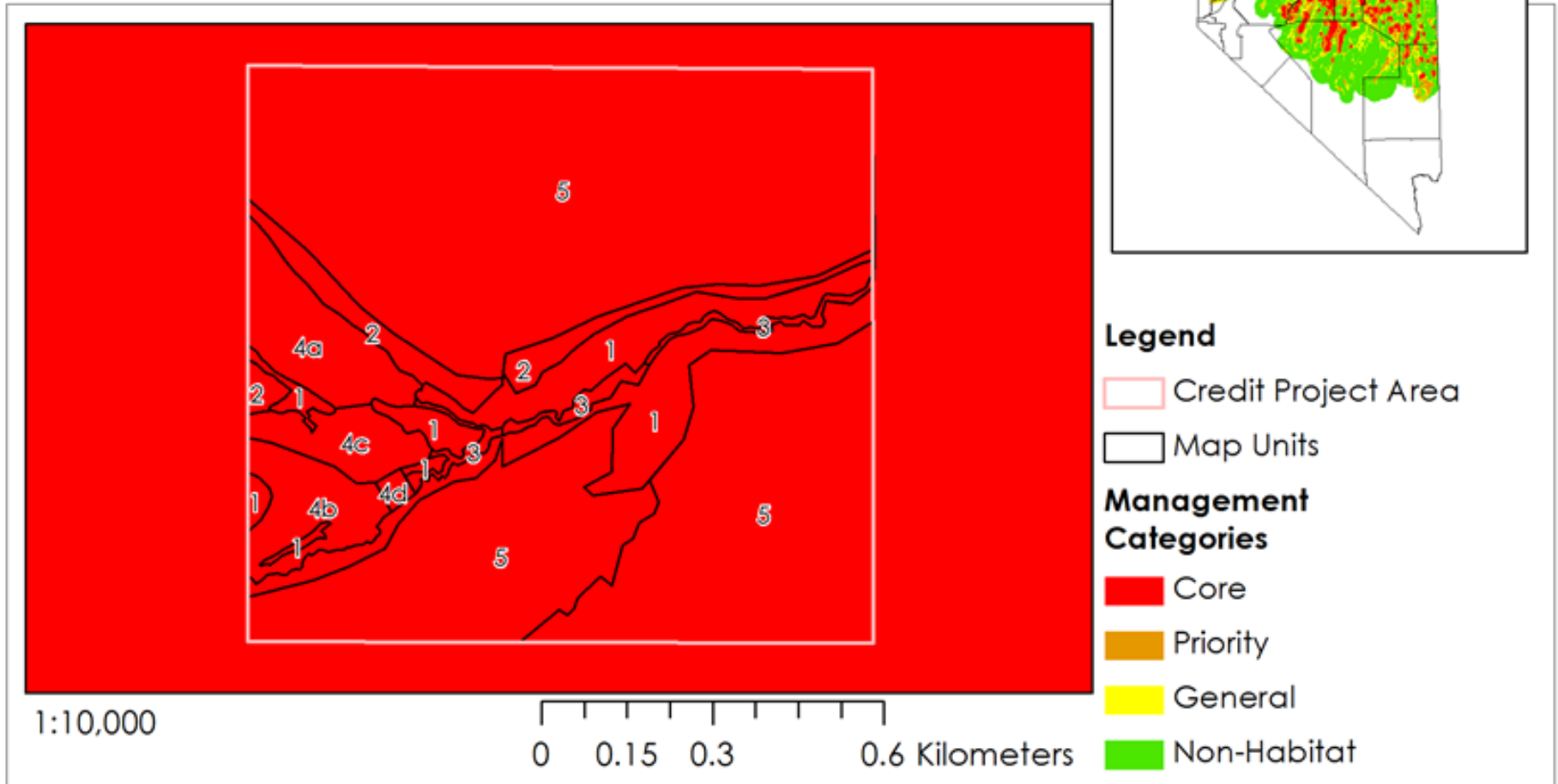


Map Unit	Acres	Precip/ Hydro	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17							

Landscape-Scale Habitat Function

- Management Category
- Limiting Seasonal Habitat

Management Category




Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core					

Limiting Seasonal Habitat



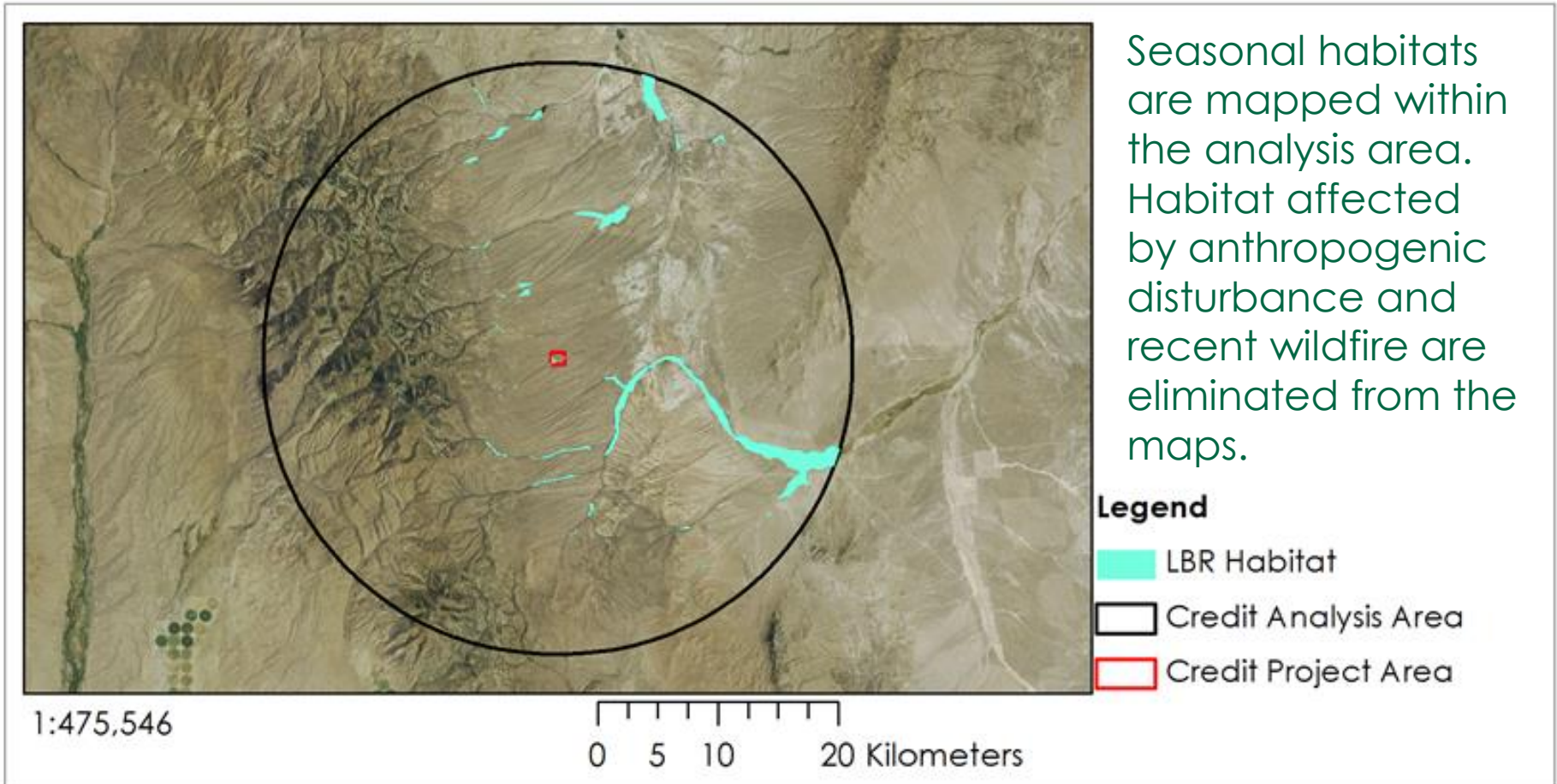
The Analysis Area includes all habitats within 18km of the Project Area. Seasonal habitats are mapped within the Analysis Area.

Legend

-  Credit Analysis Area
-  Credit Project Area

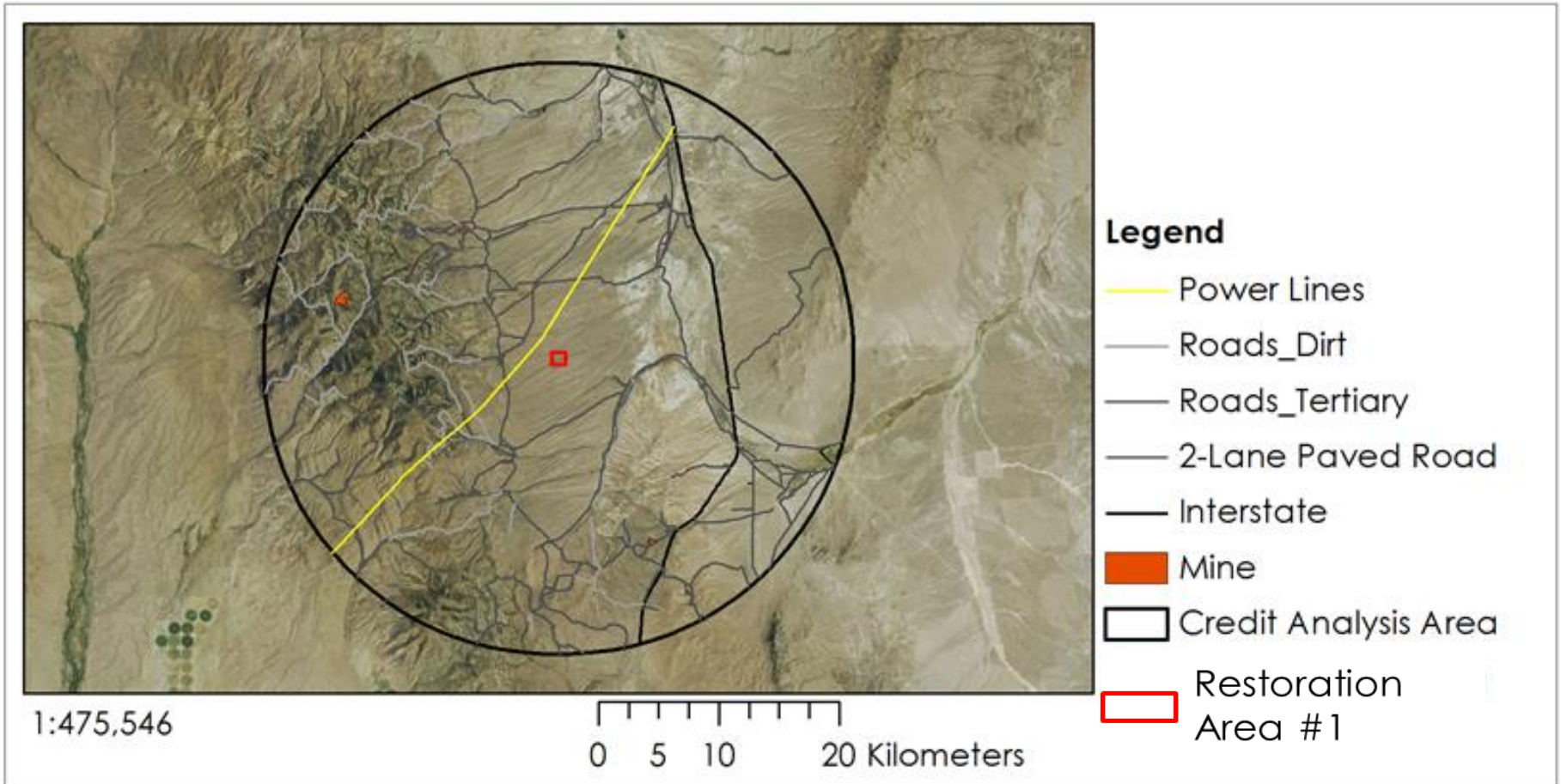
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core					

Limiting Habitat (LBR example)



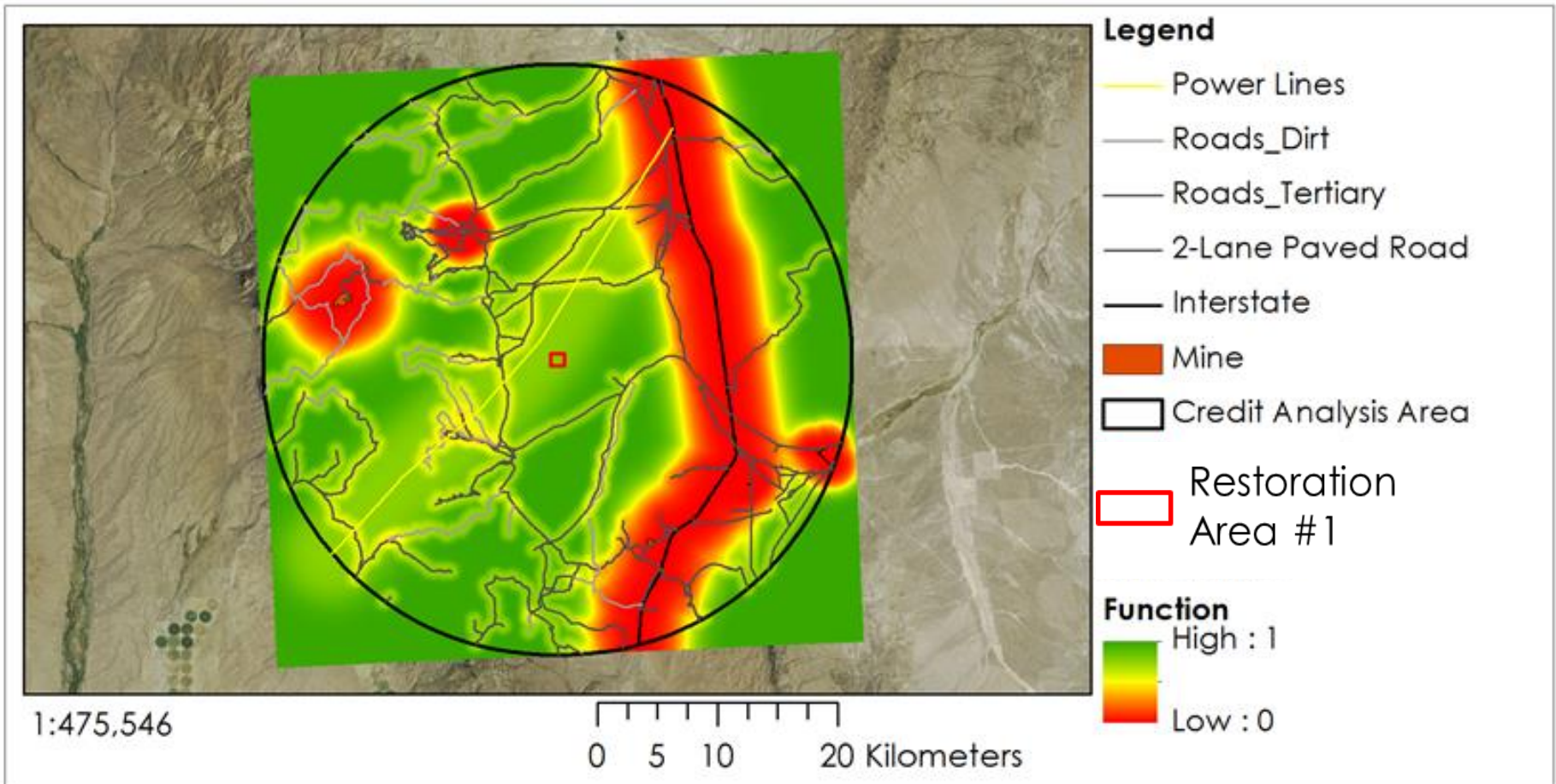
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core					

Surface Disturbance



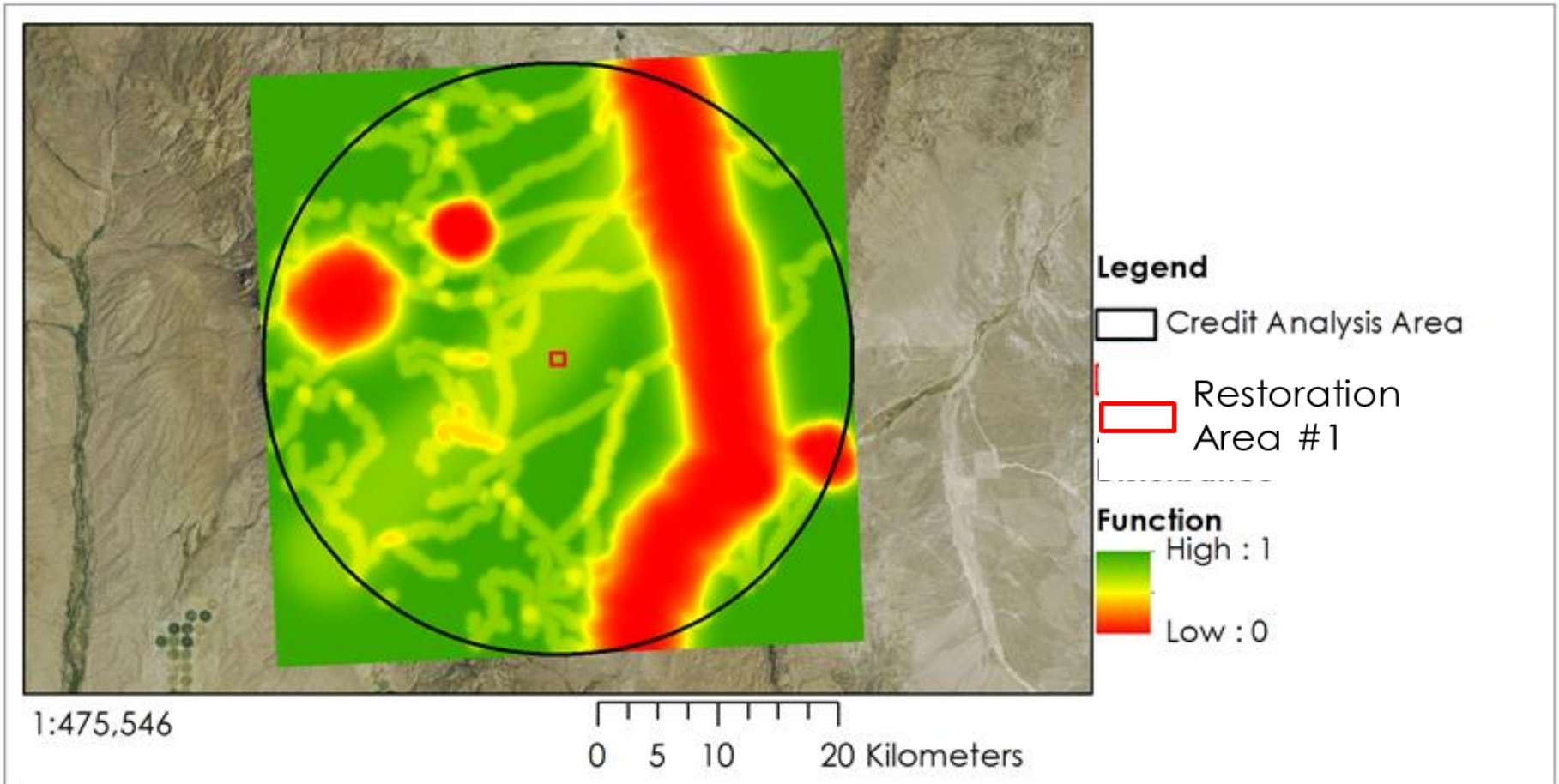
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core					

Surface Disturbance



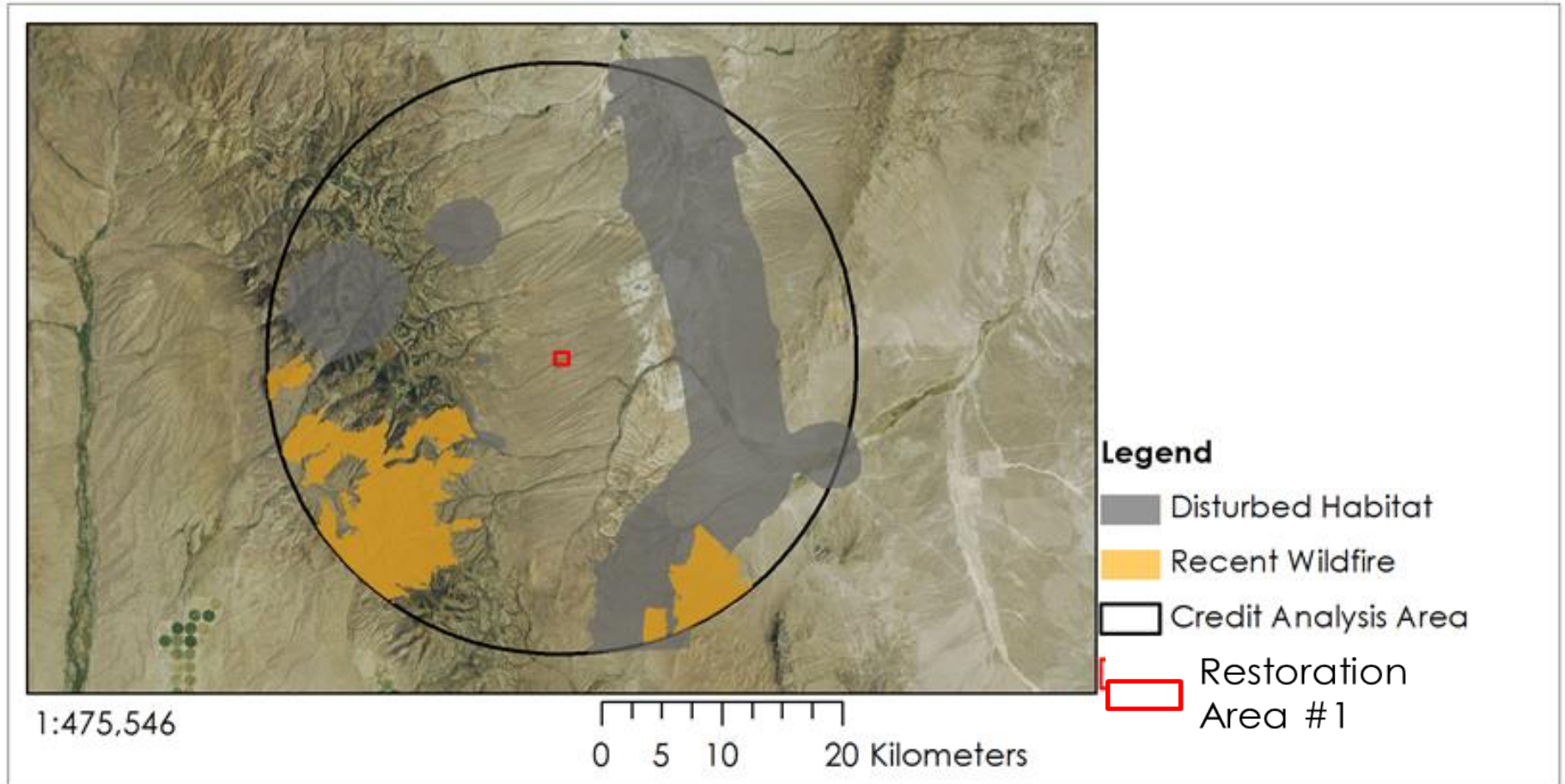
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core					

Anthropogenic Disturbance



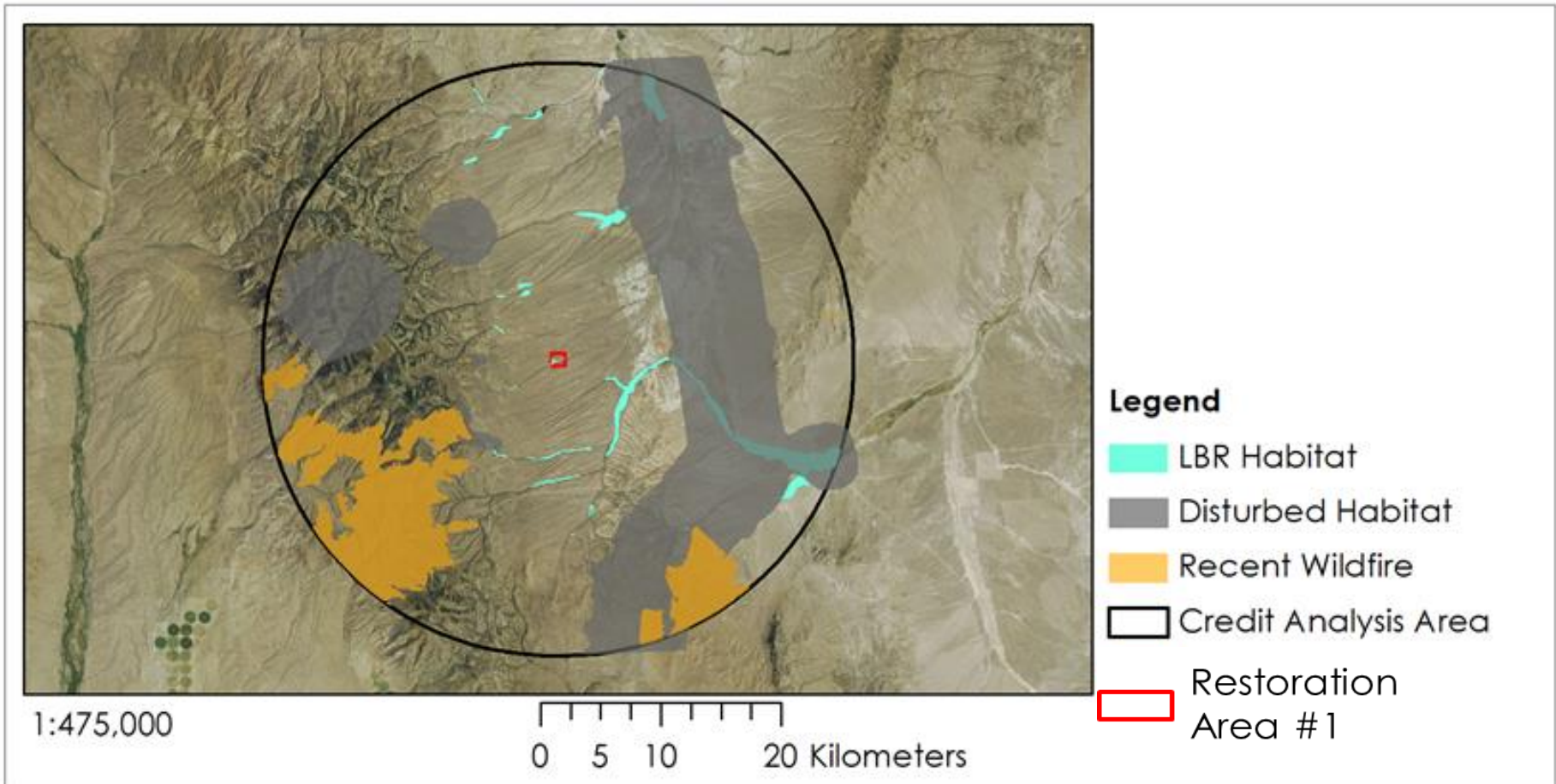
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core					

Disturbed Habitat



Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core					

Proportion LBR Habitat



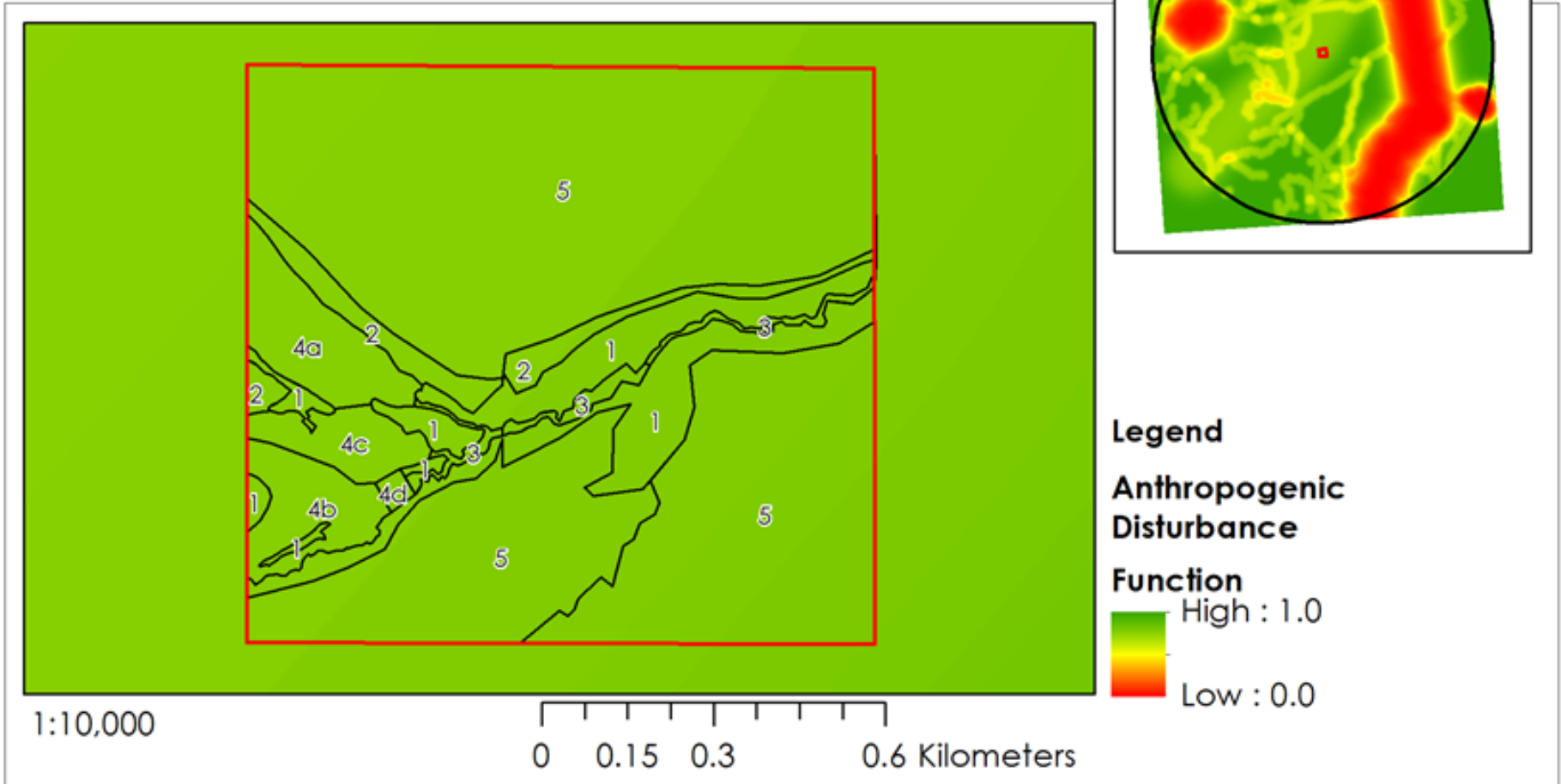
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	2% (Limiting)				

Local-Scale Habitat Function

- Anthropogenic Disturbance
- Habitat Suitability Index
- Distance to Lek (Breeding Habitat)
- Distance to LBR (Breeding Habitat)

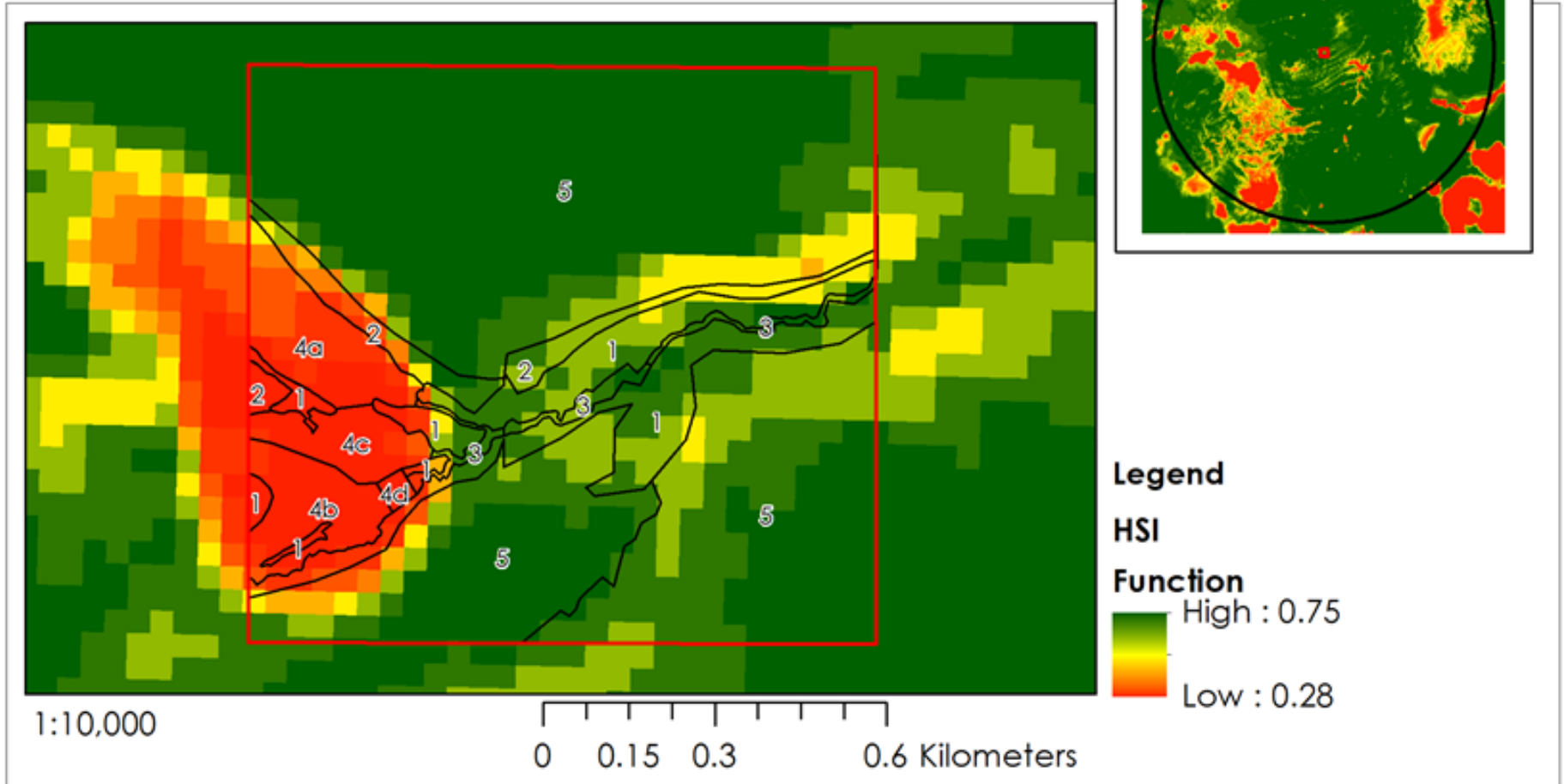
For simplicity, local scale attributes are also assessed within the Analysis Area. This can also allow project proponents to understand how relocating or expanding a project can decrease debits or increase credits.

Anthropogenic Disturbance



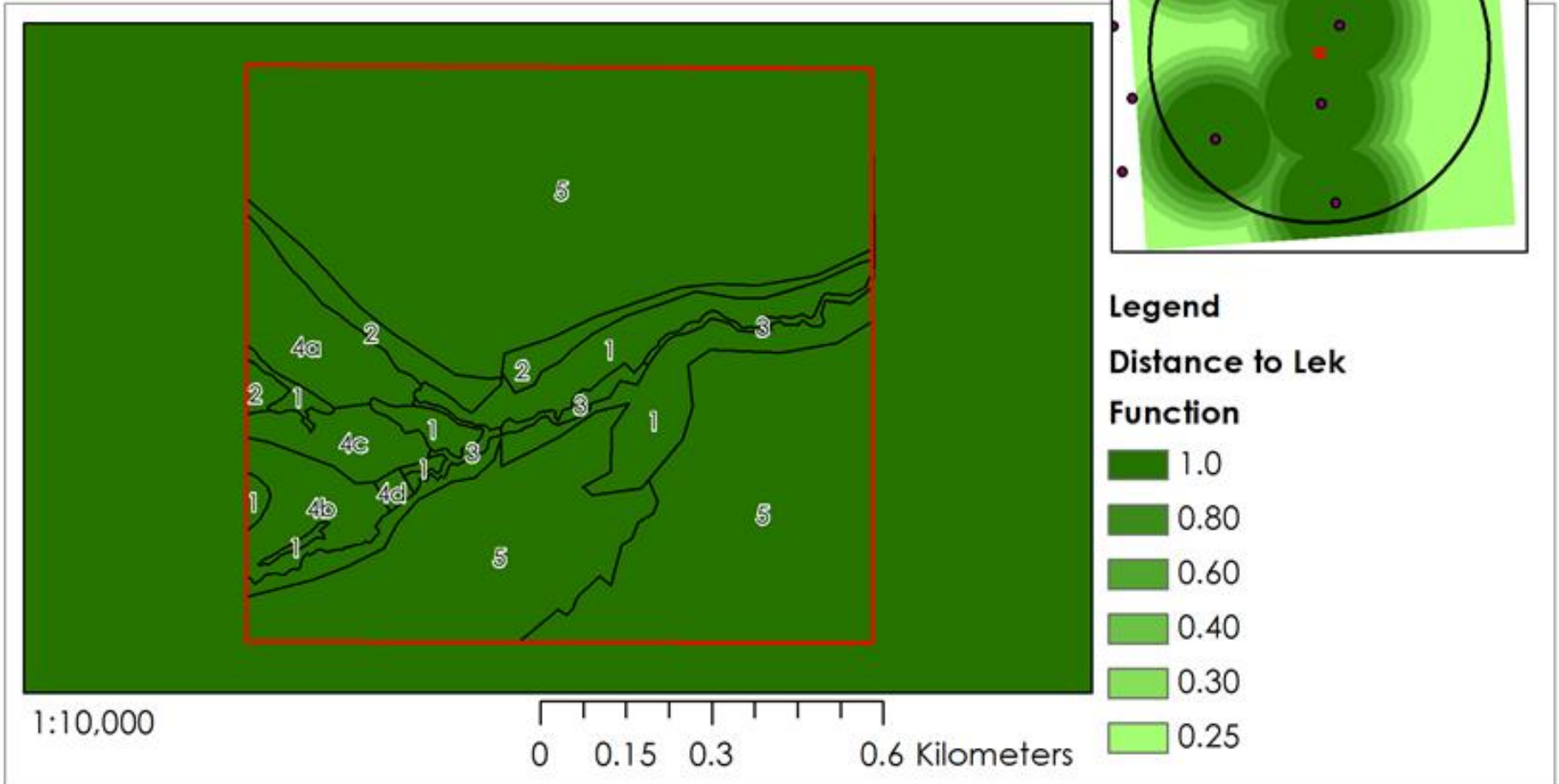
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	2% (Limiting)				

Habitat Suitability Index



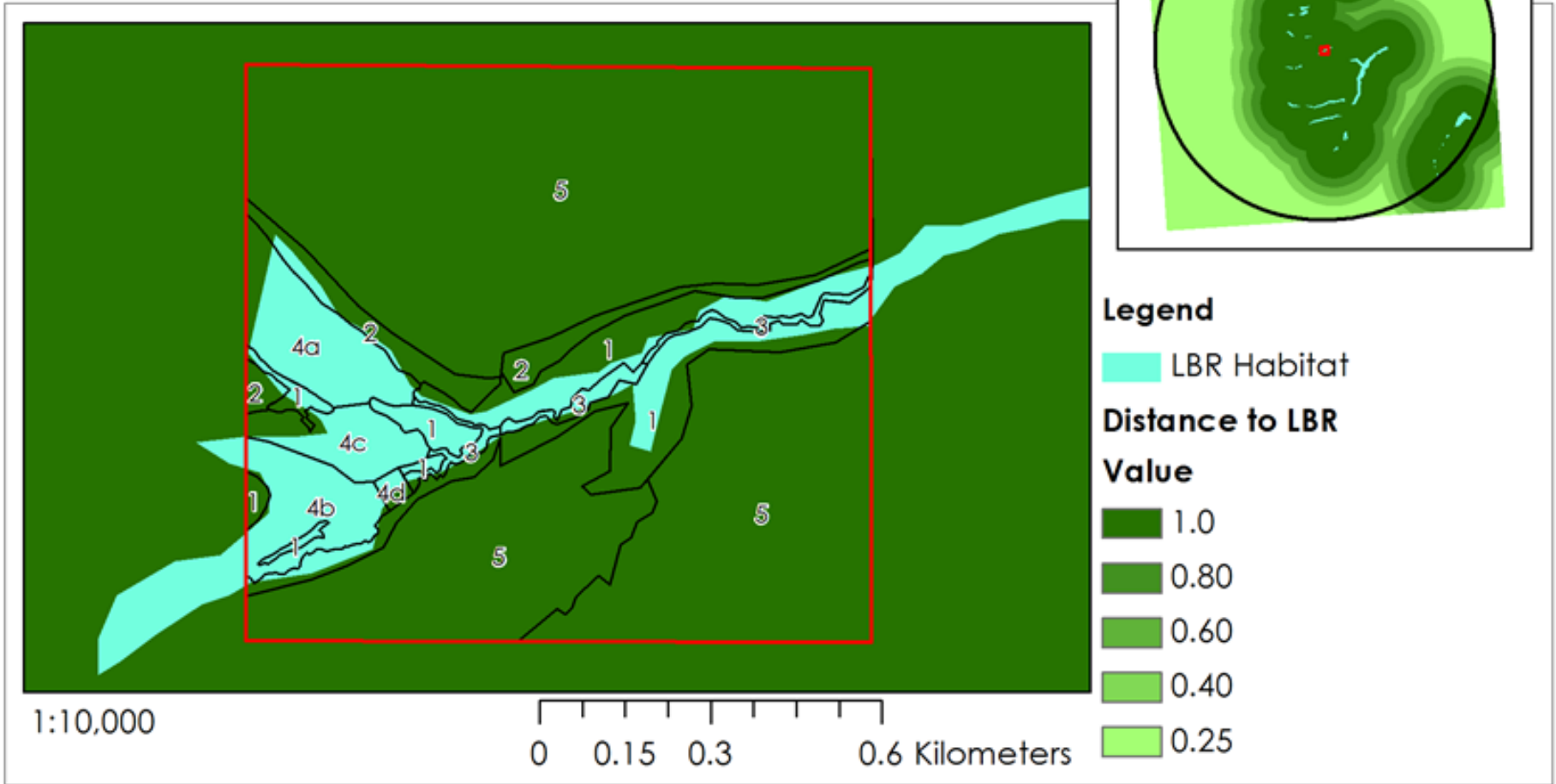
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	2% (Limiting)				

Distance to Lek (Breeding)



Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	2% (Limiting)				

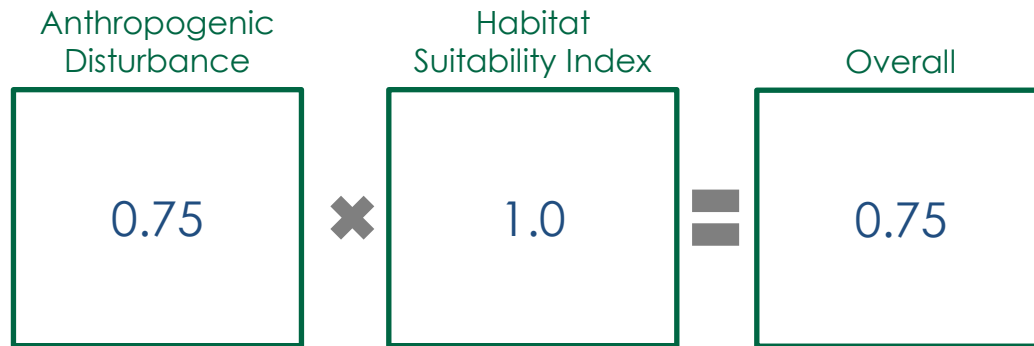
Distance to LBR (Breeding)



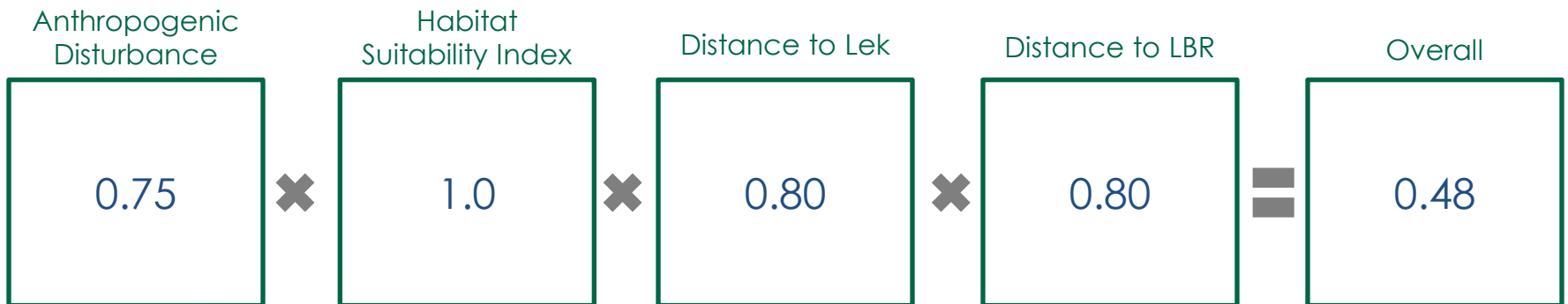
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	2% (Limiting)				

Local-Scale Habitat Function

Winter & Late Brood-Rearing

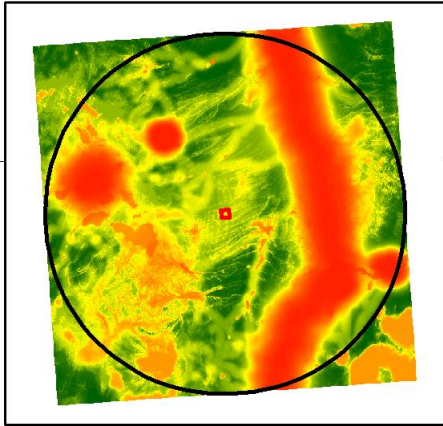


Breeding

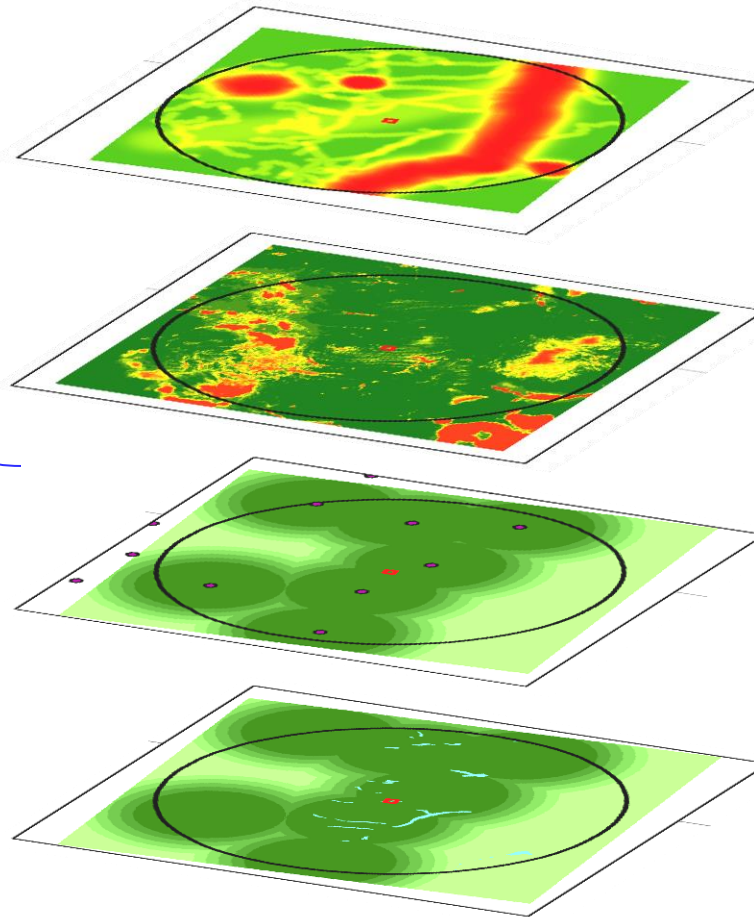


Local Scale Habitat Function

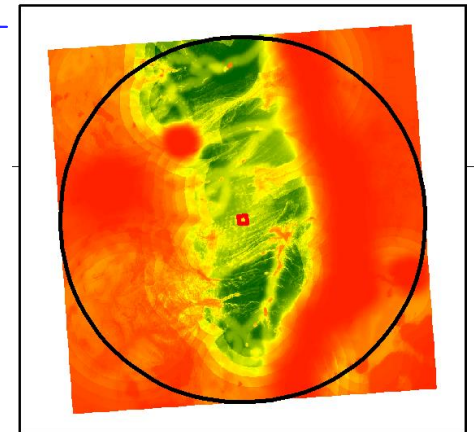
LBR & Winter



Anthropogenic Disturbance and the **HSI** are combined for LBR and winter local-scale habitat function.



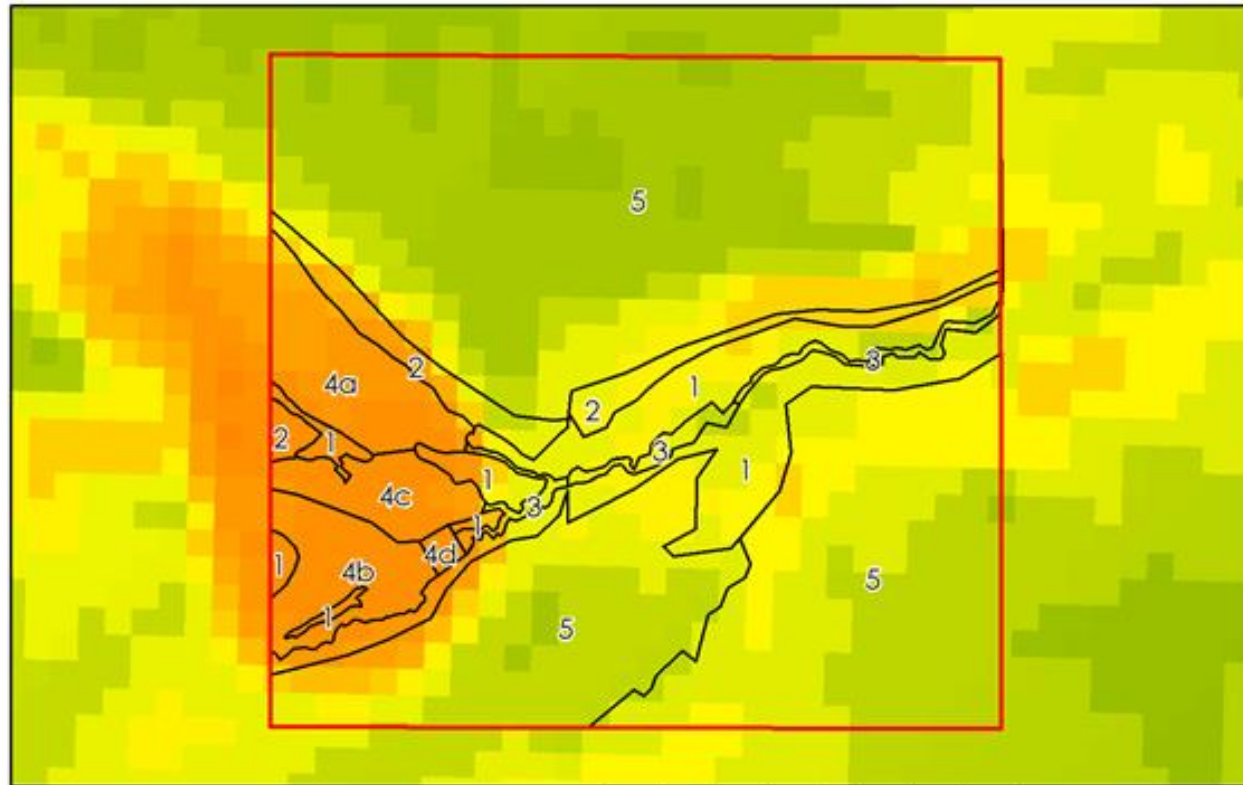
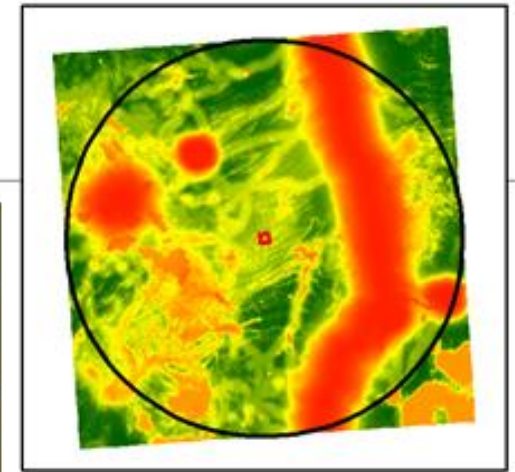
Distance to Lek and **Distance to LBR habitat** are included for breeding local-scale habitat function only.



Breeding

$$\text{Local Scale Habitat Function} = \text{Anthropogenic Disturbance} * \text{HSI} * (\text{Distance to Lek} * \text{Distance to LBR})$$

Local-Scale Habitat Function (LBR and Winter)



Legend

Local-Scale Habitat

Function

High : 1.0



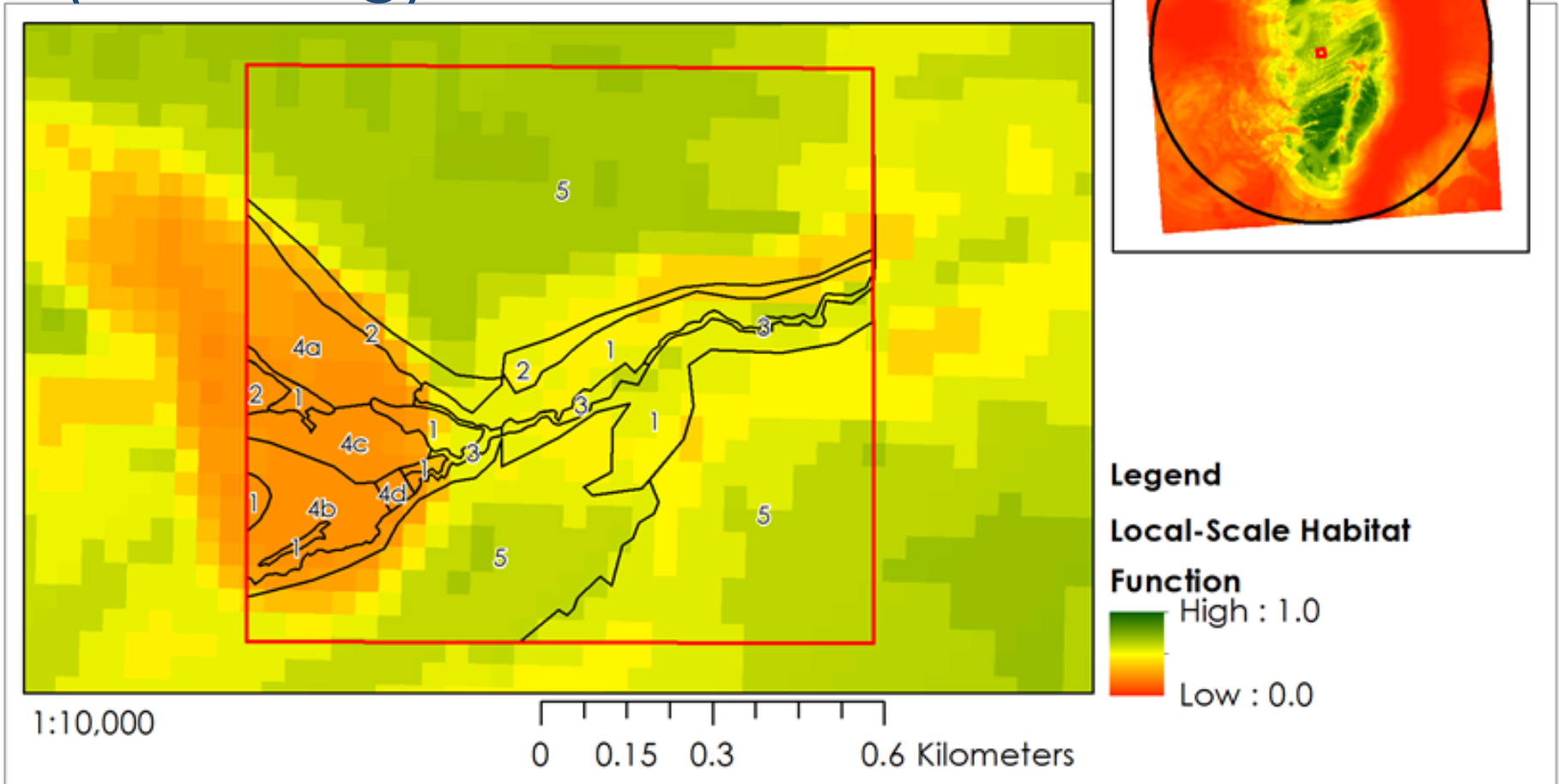
Low : 0.0

1:10,000

0 0.15 0.3 0.6 Kilometers

Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	2% (Limiting)	0.46			

Local-Scale Habitat Function (Breeding)



Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	2% (Limiting)	0.46			

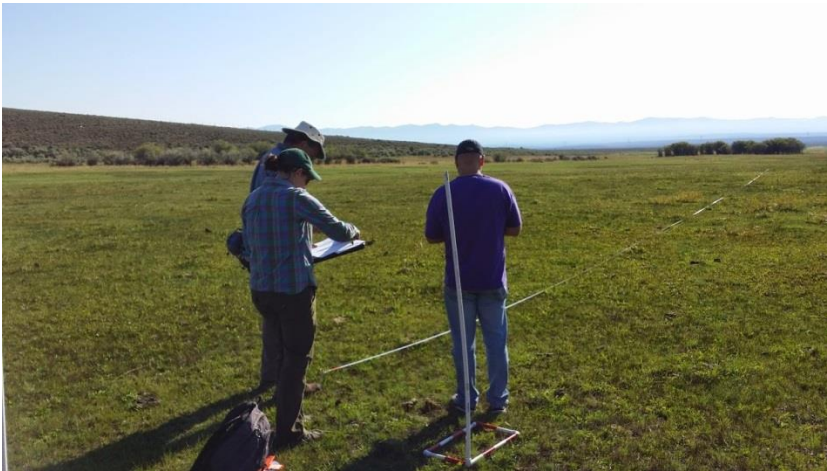
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Conduct Field Visit

- Confirm location of any anthropogenic structures
- Collect field data using the datasheet

Collect Field Data

- Breeding: 4/1 – 6/15
- Late Brood-Rearing: 7/1 – 9/15



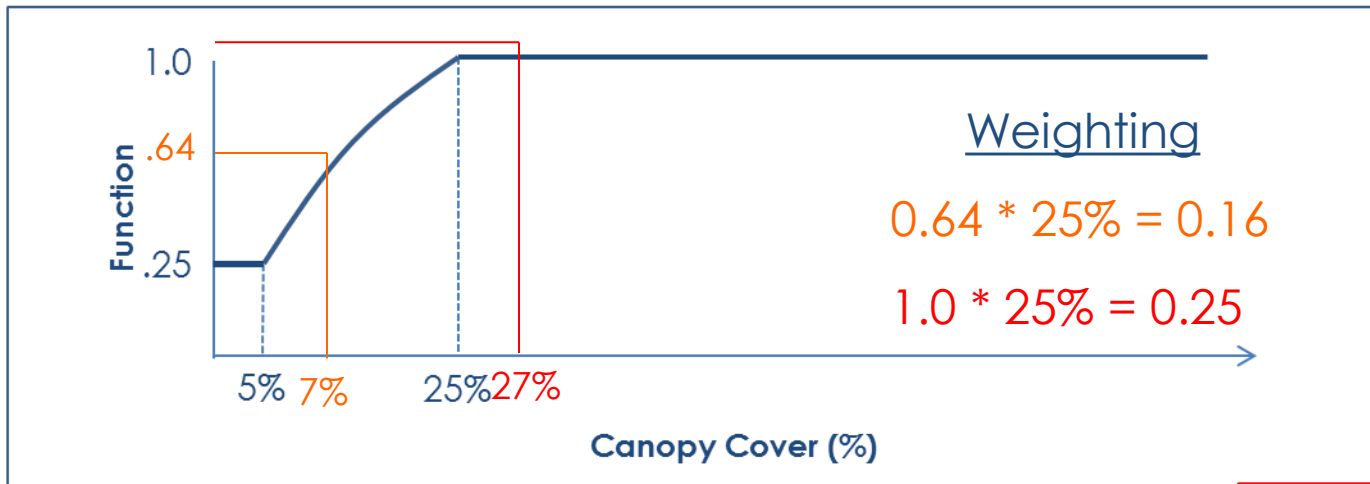
SEIT
 STATE ORIGIN: Allegheny Measurements
 City Name: WILLOW CREEK
 Date: 9/27/14
 Plot Name: ME. J. E. M.
 Plot Size: 3
 Elevation: 2019
 Transient # 1: 144 24.431
 Transient # 2: 1119 52.412
 Transient % Cover: 0.95
 Transient Agent: AL
 Transient Sample Bearing: 320
 Distance / Photo #s: 50%

Plot #	Herb Plant Sp.	Herb Plant Sp. % Cover	Plot #	Herb Plant Sp.	Herb Plant Sp. % Cover	Plot #	Herb Plant Sp.	Herb Plant Sp. % Cover
1	C. inguetai	12	2	PE1	10	3	Alb Sedge	25
1	PE1	5	2	Rod Top	10	3	Ros. Hesperis	5
1	Galb's Rush	5	2	Alb Sedge	25	4	C. inguetai	40
1	Kenilworth Rush	2	2	Ros. Hesperis	30	4	Ranunculus sp.	5
1	Ros. Hesperis	20	2	Galb's Rush	5	4	Galium sp.	1
1	Alb Sedge	5	2	PE2 (Ranunculus sp.)	3	4	PE1	1
2	C. inguetai	8	3	Ranunculus sp.	3	4	Ed. J. W.	20
2	Ranunculus sp.	1	3	PE1	10	4	Alb Sedge	25
2	Ranunculus sp.	3	3	PE1	10	4	Galb's Rush	5
2	Ranunculus sp.	1	3	Ranunculus sp.	1	5	Galium sp.	2
5	Ranunculus sp.	3						
1	Ranunculus sp.	1						
1	Rush sp.	15						
1	Alb Sedge	20						
1	Rod Top	2						
1	Ros. Hesperis	2						

4.95 m
 Rush sp. Ranunculus sp. 5m
 seedling (8-10cm)
 what was called PE2 on 4/20 is actually Ranunculus sp. repeat observations

Site-Scale Habitat Function (LBR)

Late Brood-Rearing | Perennial Grass Canopy Cover (Mesic-Shrub Systems)



Pre-project condition

0.16

Expected condition

0.25

Grass Cover

Mesic-Shrub Systems	Cover (%)	<5	5 – <10	10 – <15	15 – <20	20 – <25	≥25
	Score	.25	.45	.64	.78	.92	1

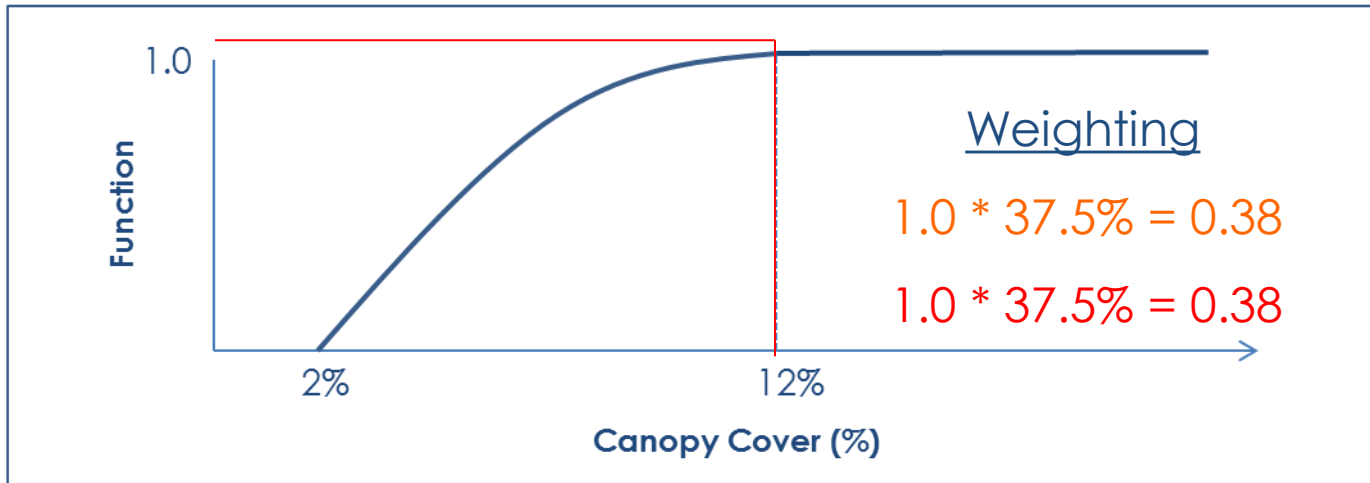
Pre-project condition

Expected condition

Map Unit	Acres	Precip/ Hydro	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Mesic	Core	2% (Limiting)	0.46			

Site-Scale Habitat Function (LBR)

Late Brood-Rearing | Perennial Forb Canopy Cover (Mesic-Shrub Systems)



Pre-project condition Expected condition

0.16	0.25	Grass Cover
0.38	0.38	Forb Cover

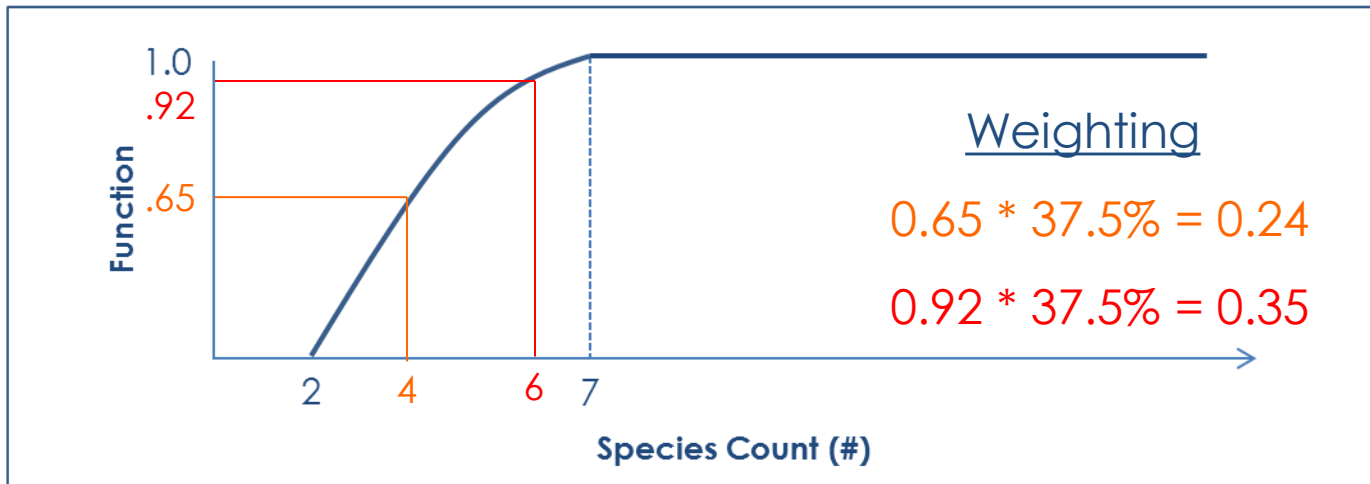
Mesic-Shrub Systems	Cover (%)	<2	2 – <4	4 – <6	6 – <8	8 – <10	10 – <12	≥12
	Score	0	.25	.45	.64	.78	.9	1

Pre-project/
Expected
condition

Map Unit	Acres	Precip/ Hydro	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Mesic	Core	2% (Limiting)	0.46			

Site-Scale Habitat Function (LBR)

Late Brood-Rearing | Forb Species Richness (Mesic-Shrub & Meadow Systems) Pre-project condition Expected condition



Mesic-Shrub & Meadow Systems	Species #	<2	2 – <3	3 – <4	4 – <5	5 – <6	6 – <7	≥7
	Score	0	.25	.45	.65	.78	.92	1

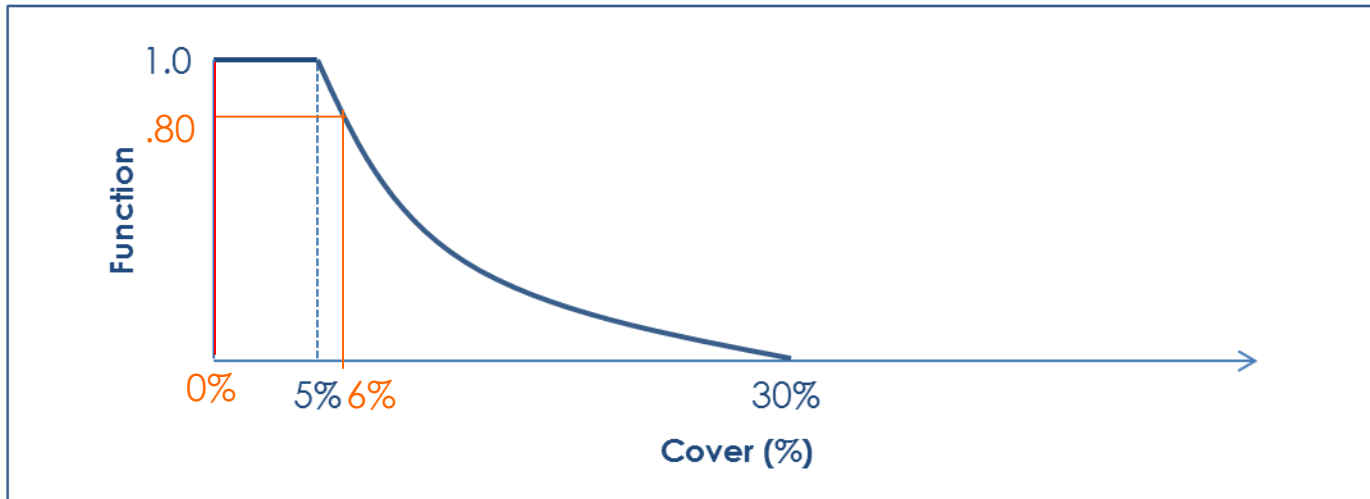
Pre-project condition Expected condition

0.16	0.25	Grass Cover
0.38	0.38	Forb Cover
0.24	.35	Forb Richness
0.78	.98	Pre-modified

Map Unit	Acres	Precip/ Hydro	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Mesic	Core	2% (Limiting)	0.46			

Site-Scale Habitat Function (LBR)

Breeding & Late Brood-Rearing | Invasive Annual Grass



Pre-project condition	Expected condition	
0.78	.98	Pre-modified
0.80	1.0	Invasive Grass

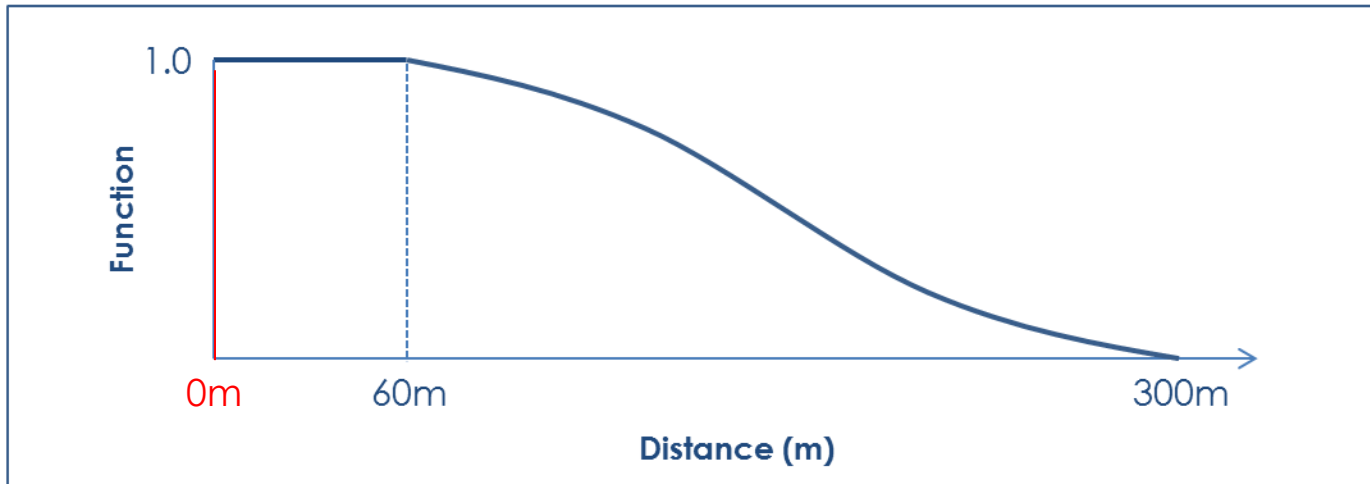
Cover (%)	<5	5 – <10	10 – <15	15 – <20	20 – <25	25 – <30	≥30
Score	1.00	0.80	0.60	0.45	0.25	0.15	0

Expected condition (0.80)
Pre-project condition (0.78)

Map Unit	Acres	Precip/ Hydro	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Mesic	Core	2% (Limiting)	0.55			

Site-Scale Habitat Function (LBR)

Late Brood-Rearing | Distance to Sagebrush



Distance (m)	<60	60 – <100	100 – <140	140 – <180	180 – <220	220 – <260	260 – <300	≥300
Score	1.00	.90	.75	.55	.35	.20	.10	0

Pre-project/
Expected
condition

	Pre-project condition	Expected condition	
	0.78	.98	Pre-modified
	0.80	1.0	Invasive Grass
	1.0	1.0	Distance to Shrubs
	0.78	0.98	Site-Scale Function

Map Unit	Acres	Precip/ Hydro	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Mesic	Core	2% (Limiting)	0.46	0.78	0.36	6.1

Restoration Project Area

Late Brood-Rearing

Pre-Project Functional Acres

Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	2% (Limiting)	0.46	0.78	36%	6.1
2	6	Core	2% (Limiting)	0.42	0.64	27%	1.6
3	2	Core	2% (Limiting)	0.52	0.92	48%	1.0
4a	6	Core	2% (Limiting)	0.26	0.29	7%	0.4
4b	5	Core	2% (Limiting)	0.23	0.64	15%	0.7
4c	4	Core	2% (Limiting)	0.23	0.24	6%	0.2
4d	0.5	Core	2% (Limiting)	0.24	0.58	14%	0.1
5	112	Core	2% (Limiting)	0.56	0.11	6%	6.9

3

Calculate Credits

- Estimate post-project habitat function
- Calculate breeding, summer, and winter habitat function difference between post-project and baseline for each map unit

- Pre-project habitat function
- Post-project estimated habitat function
- Mitigation Ratio
- Reserve Account



Calculate difference between post-project habitat function and credit baseline habitat function, credits generated and credits for sale

Baseline Functional Acres

	Baseline	Pre-Project	Post-Project
Local-scale average habitat function	56%		
Site-scale average habitat function	45%		
Combined average habitat function	25%		
Functional acres	890		

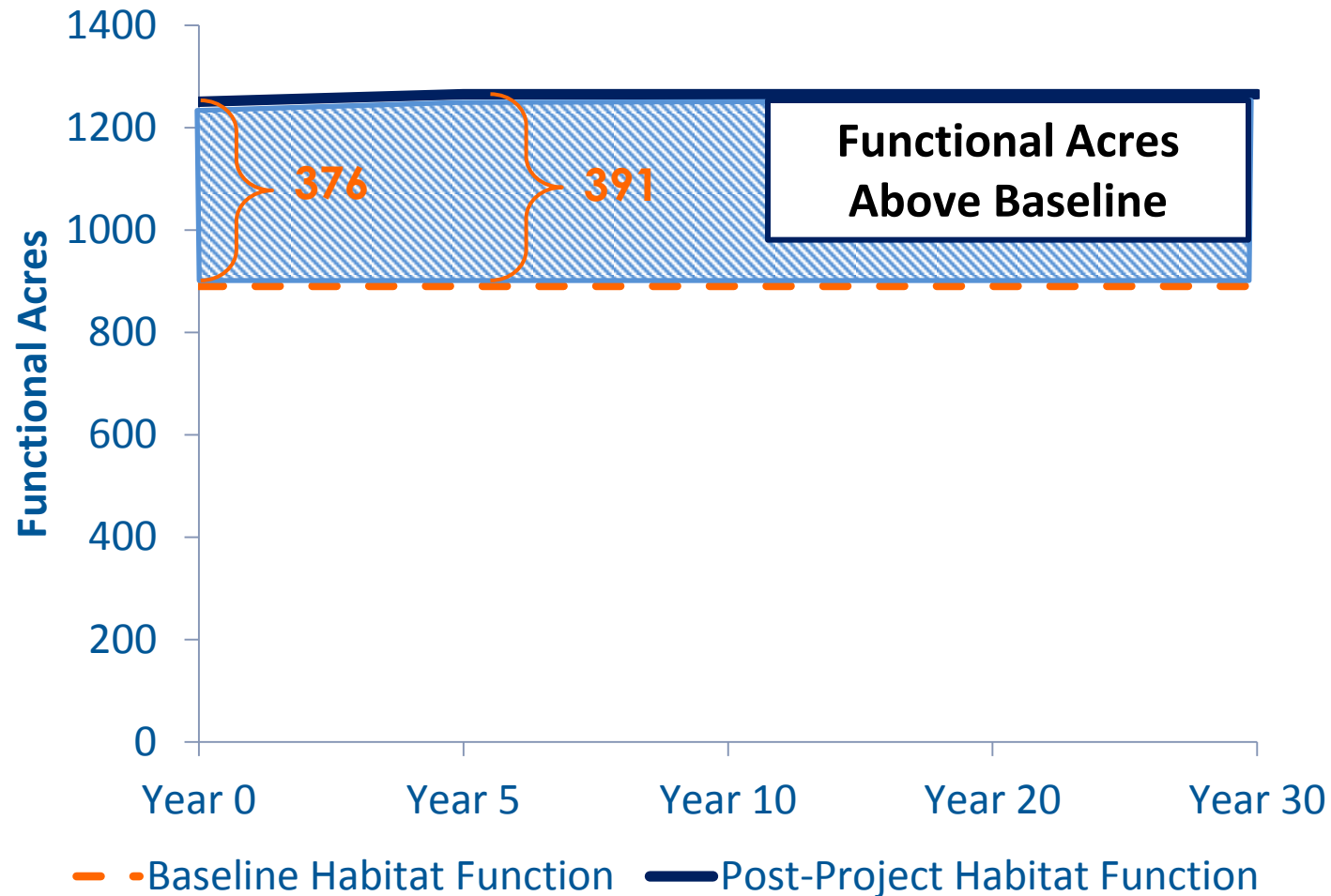
Table 11: Site-scale regional standard habitat functions

		WAFWA Management Zones		
		MZ III	MZ IV	MZ V
SEASONAL HABITAT TYPES	Breeding	30%	30%	20%
	Late Brood-Rearing	20%	30%	20%
	Winter	65%	60%	60%

Functional Acres Above Baseline

	Baseline	Pre-Project	Post-Project
Local-scale average habitat function	56%	56%	56%
Site-scale average habitat function	45%	64%	65%
Combined average habitat function	25%	35%	36%
Functional acres	890	1,266	1,291
Functional acres above baseline		376	391

Functional Acres Above Baseline



Credit Calculation

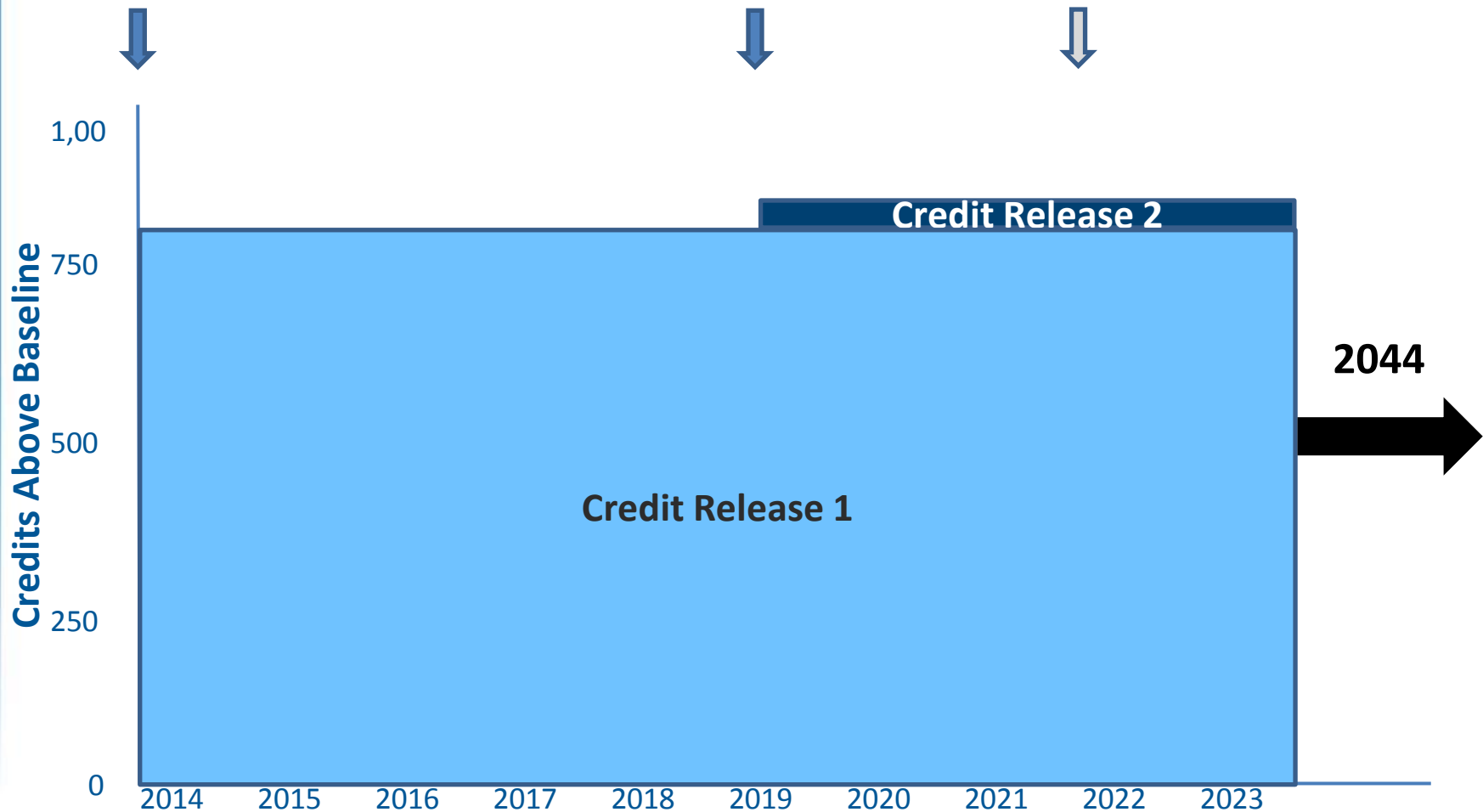
	Pre-Project Functional Acres Above Baseline	Post-Project Addl. Functional Acres Above Pre-Project	Average Management Importance Ratio	Average Limiting Seasonal Habitat Ratio*	Average Combined Mitigation Ratio*	Credits Available in Year 1	Credits Available Post-Project
Late Brood-Rearing	8.9	3.4	1.1	44.9	46.0	404	167
Breeding	260.0	0.0	1.1	0.0	1.1	286	0
Winter	106.6	11.3	1.1	0.0	1.1	117	12
						807	167

**Ratios are average across map units, not a weighted-average, so functional acres above baseline multiplied by ratios do not equal credits in table, which are based on actual per map unit calculations*

Credit Release Schedule

PERFORMANCE STANDARD ACHIEVED	CREDITS RELEASED
Milestone 1 – Year 1	
Pre-project habitat function	807
Milestone 2 – Year 5	
Post-project habitat function	167
TOTAL CREDITS GENERATED	974

Credit Release Schedule



Verification



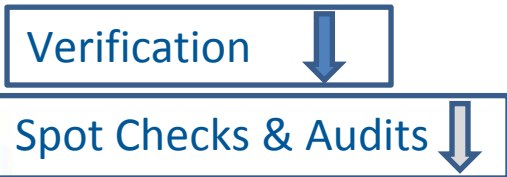
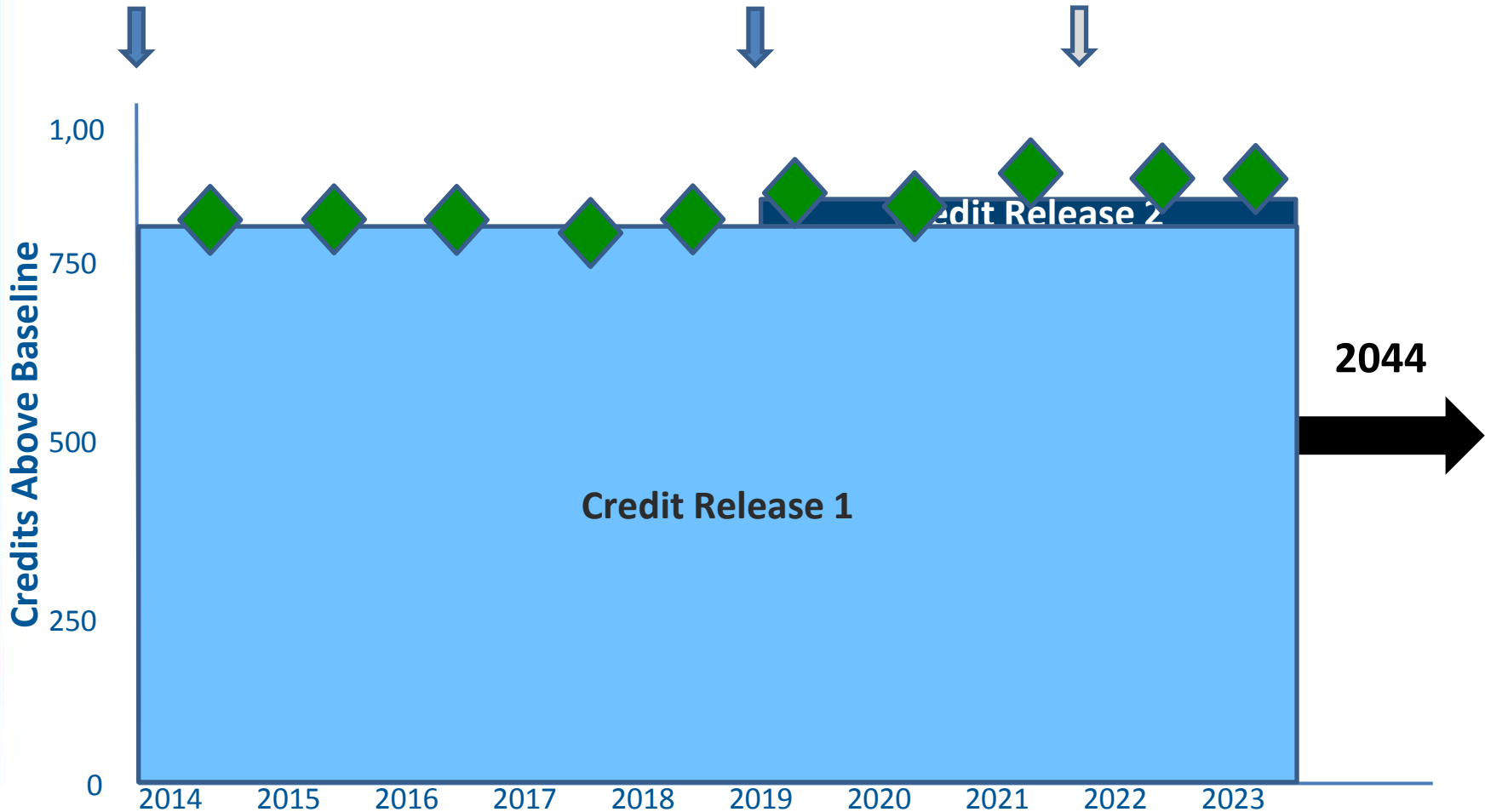
Credits Awarded for Performance



Spot Checks & Audits



Credit Release Schedule



Credits Awarded for Performance P P
 Annual Habitat Function ◆

Management Plan

- Project Summary & Site Characteristics
- Performance Standards, Credit Estimate & Credit Release Schedule
- Management, Monitoring & Verification Requirements
- Financial Assurances

Financial Assurances

- 1) Stewardship Investment Fund and contract terms in Participant Contract
- 2) Financial penalty in Participant Contract

Participant Contract

- Legal agreement between Credit Developer(s) and Administrator
- Defines relevant terms and conditions for the development of credits under the Credit System
- Defines obligations of the Credit Developer(s) and secured financial assurances
- Binds a credit sit to a Management Plan



- Conduct annual self-monitoring
- Select verifier & conduct third-party verification

SITE CHARACTERIZATION REPORT
 Site Name: [Handwritten] County: [Handwritten]
 Date: 8/24/14
 Version: 1.1
 Project Name: [Handwritten]
 Project No.: [Handwritten]

Plant #	Plant Name	Plant Type	Plant Size (ft ²)	Plant #	Plant Name	Plant Type	Plant Size (ft ²)
1	Red Top	10	3	2	Red Top	10	3
2	Red Top	25	2	3	Red Top	25	2
3	Red Top	20	1	4	Red Top	20	1
4	Red Top	5	1	5	Red Top	5	1
5	Red Top	5	1	6	Red Top	5	1
6	Red Top	5	1	7	Red Top	5	1
7	Red Top	5	1	8	Red Top	5	1
8	Red Top	5	1	9	Red Top	5	1
9	Red Top	5	1	10	Red Top	5	1
10	Red Top	5	1	11	Red Top	5	1
11	Red Top	5	1	12	Red Top	5	1
12	Red Top	5	1	13	Red Top	5	1
13	Red Top	5	1	14	Red Top	5	1
14	Red Top	5	1	15	Red Top	5	1
15	Red Top	5	1	16	Red Top	5	1
16	Red Top	5	1	17	Red Top	5	1
17	Red Top	5	1	18	Red Top	5	1
18	Red Top	5	1	19	Red Top	5	1
19	Red Top	5	1	20	Red Top	5	1
20	Red Top	5	1	21	Red Top	5	1
21	Red Top	5	1	22	Red Top	5	1
22	Red Top	5	1	23	Red Top	5	1
23	Red Top	5	1	24	Red Top	5	1
24	Red Top	5	1	25	Red Top	5	1
25	Red Top	5	1	26	Red Top	5	1
26	Red Top	5	1	27	Red Top	5	1
27	Red Top	5	1	28	Red Top	5	1
28	Red Top	5	1	29	Red Top	5	1
29	Red Top	5	1	30	Red Top	5	1
30	Red Top	5	1	31	Red Top	5	1
31	Red Top	5	1	32	Red Top	5	1
32	Red Top	5	1	33	Red Top	5	1
33	Red Top	5	1	34	Red Top	5	1
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35	Red Top	5	1	36	Red Top	5	1
36	Red Top	5	1	37	Red Top	5	1
37	Red Top	5	1	38	Red Top	5	1
38	Red Top	5	1	39	Red Top	5	1
39	Red Top	5	1	40	Red Top	5	1
40	Red Top	5	1	41	Red Top	5	1
41	Red Top	5	1	42	Red Top	5	1
42	Red Top	5	1	43	Red Top	5	1
43	Red Top	5	1	44	Red Top	5	1
44	Red Top	5	1	45	Red Top	5	1
45	Red Top	5	1	46	Red Top	5	1
46	Red Top	5	1	47	Red Top	5	1
47	Red Top	5	1	48	Red Top	5	1
48	Red Top	5	1	49	Red Top	5	1
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51	Red Top	5	1	52	Red Top	5	1
52	Red Top	5	1	53	Red Top	5	1
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54	Red Top	5	1	55	Red Top	5	1
55	Red Top	5	1	56	Red Top	5	1
56	Red Top	5	1	57	Red Top	5	1
57	Red Top	5	1	58	Red Top	5	1
58	Red Top	5	1	59	Red Top	5	1
59	Red Top	5	1	60	Red Top	5	1
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63	Red Top	5	1	64	Red Top	5	1
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78	Red Top	5	1	79	Red Top	5	1
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93	Red Top	5	1	94	Red Top	5	1
94	Red Top	5	1	95	Red Top	5	1
95	Red Top	5	1	96	Red Top	5	1
96	Red Top	5	1	97	Red Top	5	1
97	Red Top	5	1	98	Red Top	5	1
98	Red Top	5	1	99	Red Top	5	1
99	Red Top	5	1	100	Red Top	5	1

4.96 m
 Kush 5000 3-100cm
 what was called PE2 on 1/3 on 5/20 is actually Radonous 5000! Radonous 5000!

Third-Party Verification Procurement and Schedule



Schedule

- Prior to a release of credits
- At least every 5 years
- Potential spot check/audit



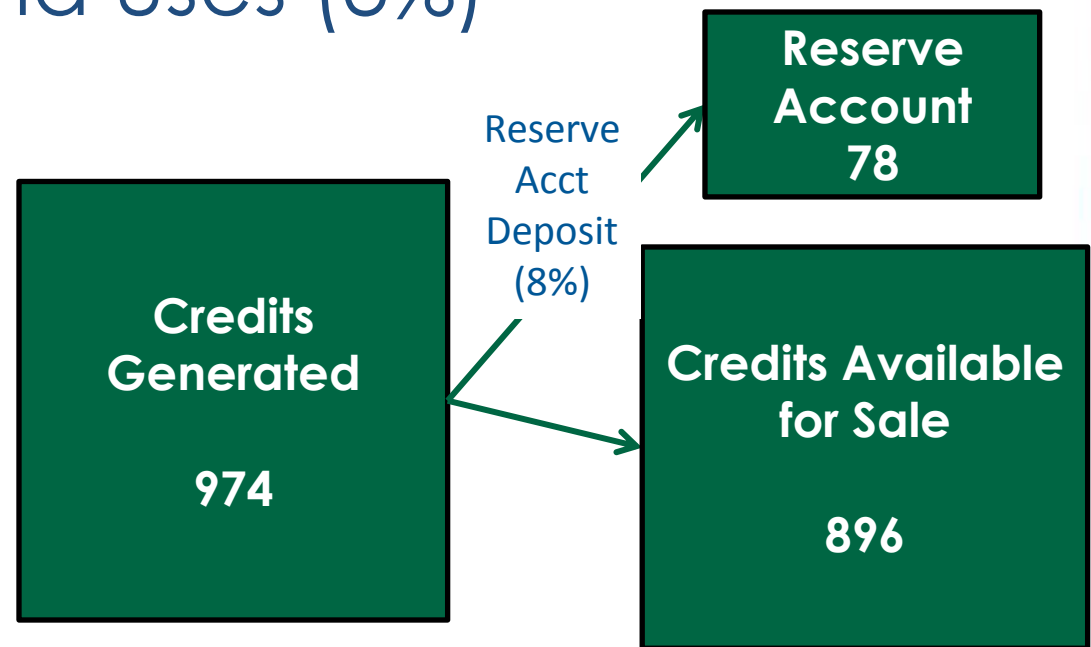
- Create a registry account
- Register project
- Credits are issued based on credit release schedule



- Transfer credits to the reserve account
- Sell and transfer credits
- Report accomplishments

Reserve Account Contribution

- Base contribution (4%)
- Resistance & resilience (1%)
- Competing land uses (3%)



Credit Project Summary

Acres Protected: 3,460

**Difference between Post-Project and
Baseline Habitat Function: 391**

Credits Generated: 974

Credits for Sale: 896

Duration: 30

Credit Project Scenarios

	Current (Good)	Very Good
Acres Protected	3,460	3,460
Post-Project Functional Acres Above Baseline	391	1,099
Credits Generated	974	4,192
Credits for Sale	896	4,024

Very Good

- Very high local-scale habitat function
- Very high site-scale habitat function
- 1% limiting seasonal habitat for LBR
- 4% reserve account contribution

Example Transaction Sequence

#1 Credit Generation

#2 Credit Acquisition

Select &
Validate
Site

Implement
& Calculate
Credit

Verify
Conditions

Register &
Issue

Track &
Transfer

Acquire
Credits

Determine
Credit Need

Indicate
Interest

Debit Project Overview

- Project is on BLM land and consists of a geothermal power plant (71 acre footprint) and 23.7 Km transmission line (road access existed prior to the project)
- Avoidance and minimization already addressed
- Plan and transmission line will be removed in 20 years



Track &
Transfer

Acquire
Credits

Determine
Credit Need

Indicate
Interest

- Become aware of opportunity or requirement to participate
- Contact Administrator and provide basic information
- Receive list of Technical Support Providers to assist

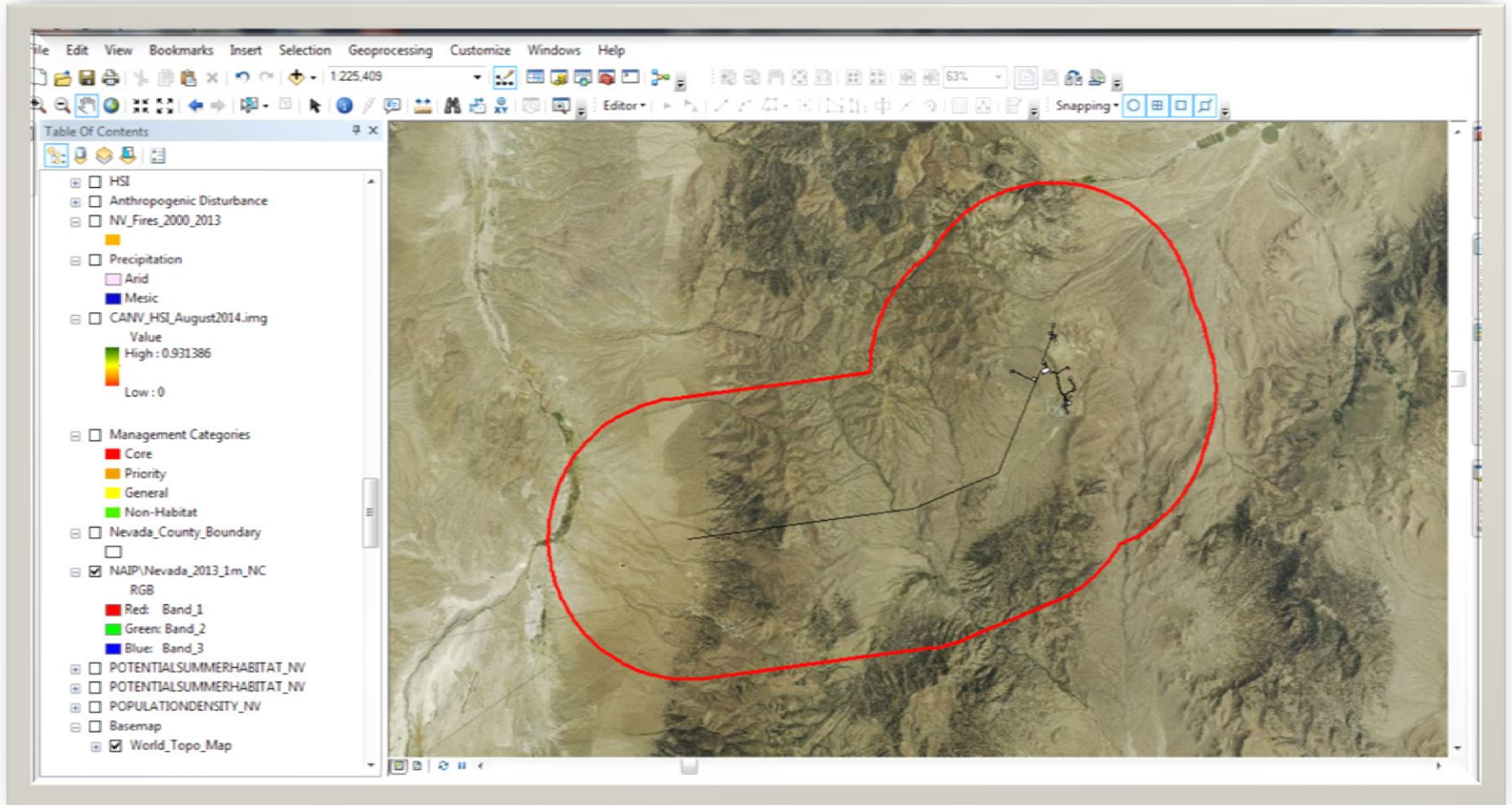


- Develop project plan
- Calculate estimated debits and credit obligation
- Establish Verification Contract
- Conduct pre-project third-party verification
- Submit documentation to Administrator

1

Conduct Pre-Field Visit Desktop Analysis

- Digitize the project area & map units
- Measure landscape scale attributes
- Measure local scale attributes



Debit Project Footprint



The example debit project is a geothermal energy plant with 116 acres of surface disturbance.

Legend

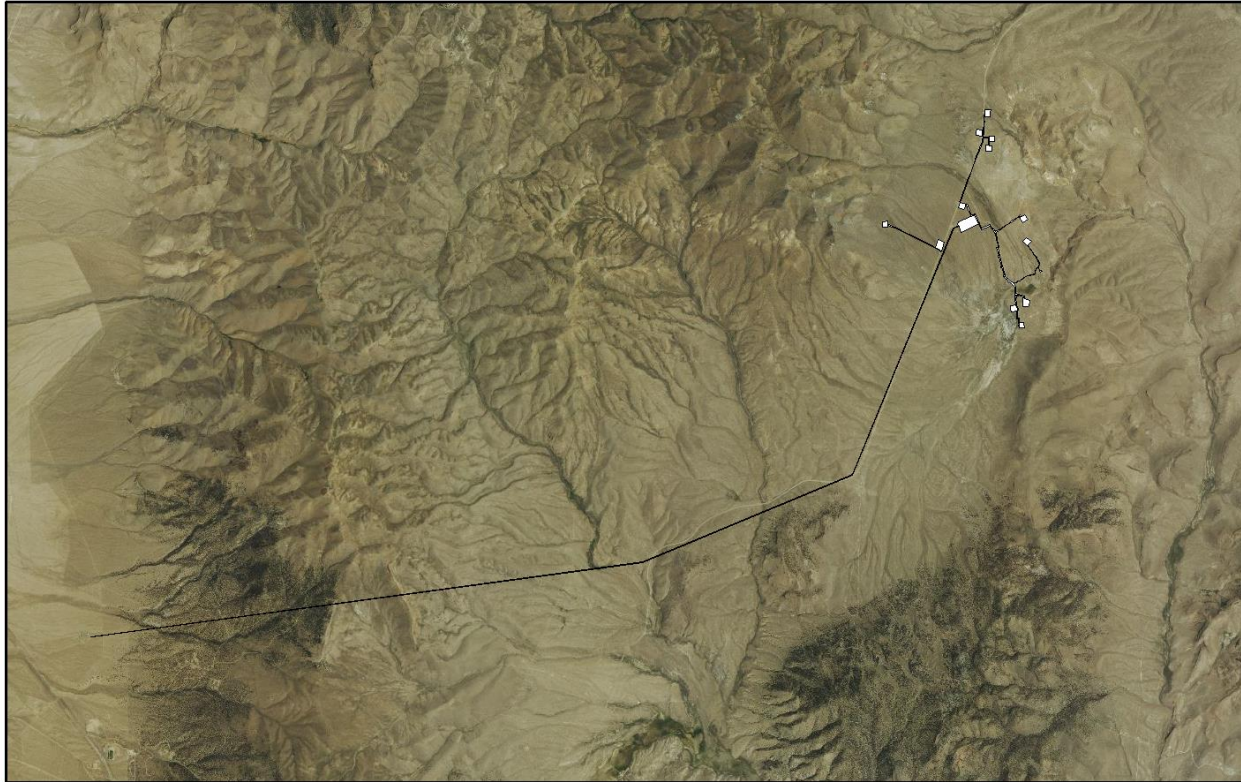
□ Debit Project Footprint

1:50,000

0 0.75 1.5 3 Kilometers

Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45						

Debit Project Footprint



The example debit project is a geothermal energy plant with 116 acres of surface disturbance.

Legend

□ Debit Project Footprint

1:150,000

0 2.25 4.5 9 Kilometers

Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45						

Debit Project Area

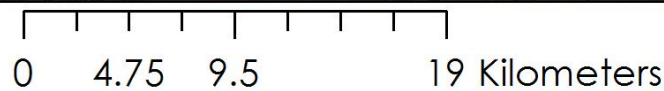


The Debit Project Area includes all habitats affected by the indirect effects of the anthropogenic disturbance.

Legend

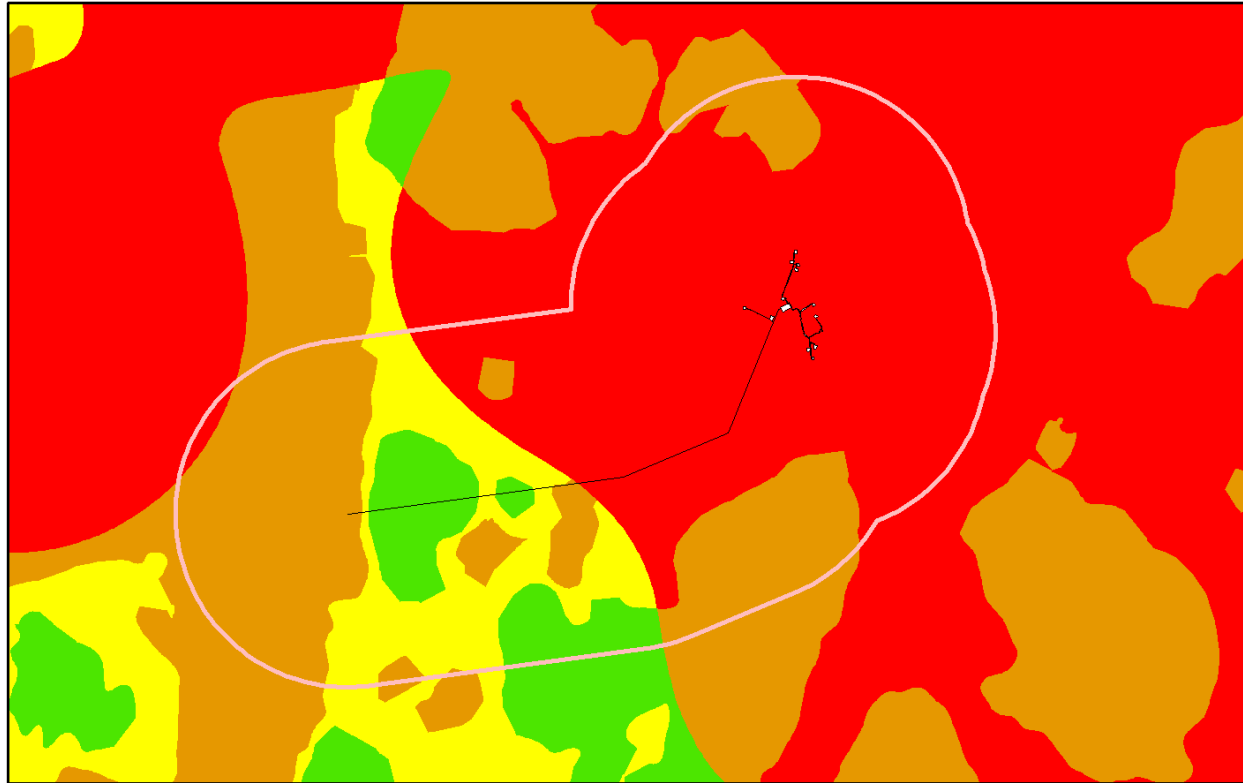
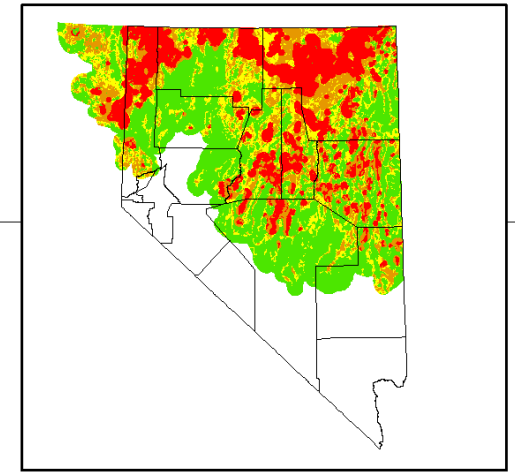
- Debit Project Area
- Debit Project Footprint

1:300,000



Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45						

Management Category



Legend

- Debit Project Area
- Debit Project Footprint

Management Categories

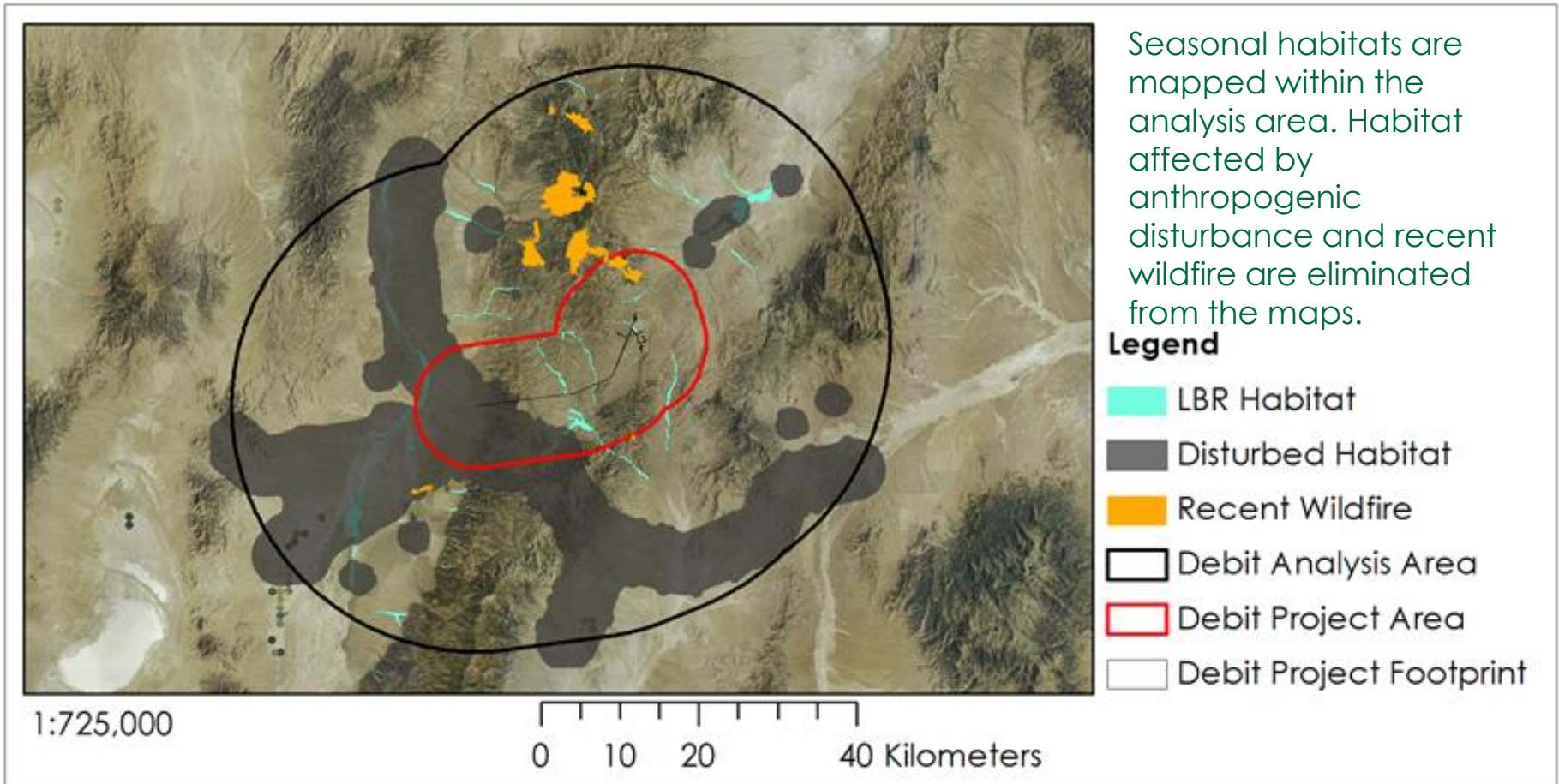
- Core
- Priority
- General
- Non-Habitat

1:300,000

0 4.75 9.5 19 Kilometers

Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core					

Proportion LBR Habitat



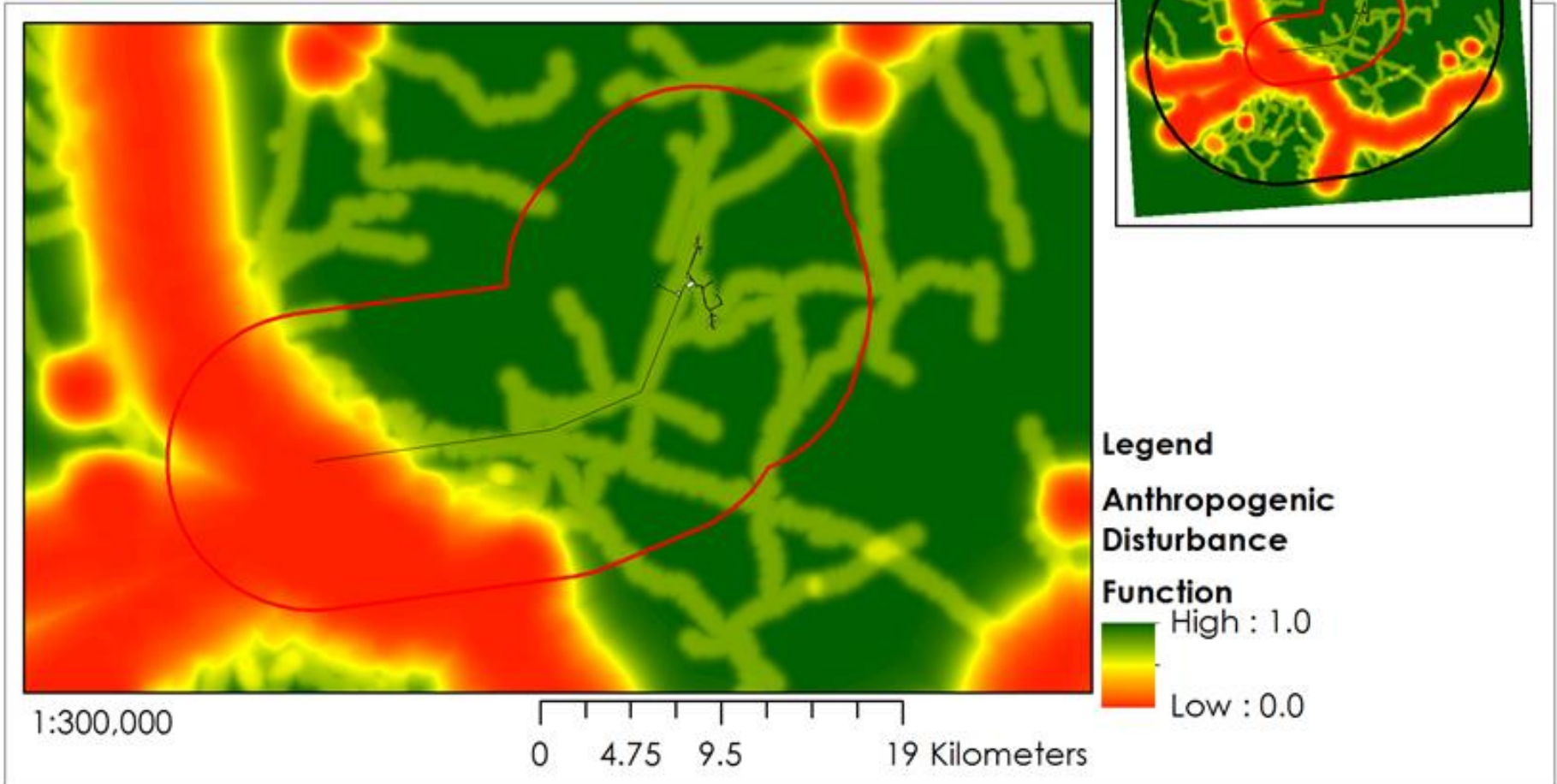
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	4%				

Local-Scale Habitat Function

- Anthropogenic Disturbance
- Habitat Suitability Index
- Distance to Lek (Breeding Habitat)
- Distance to LBR (Breeding Habitat)

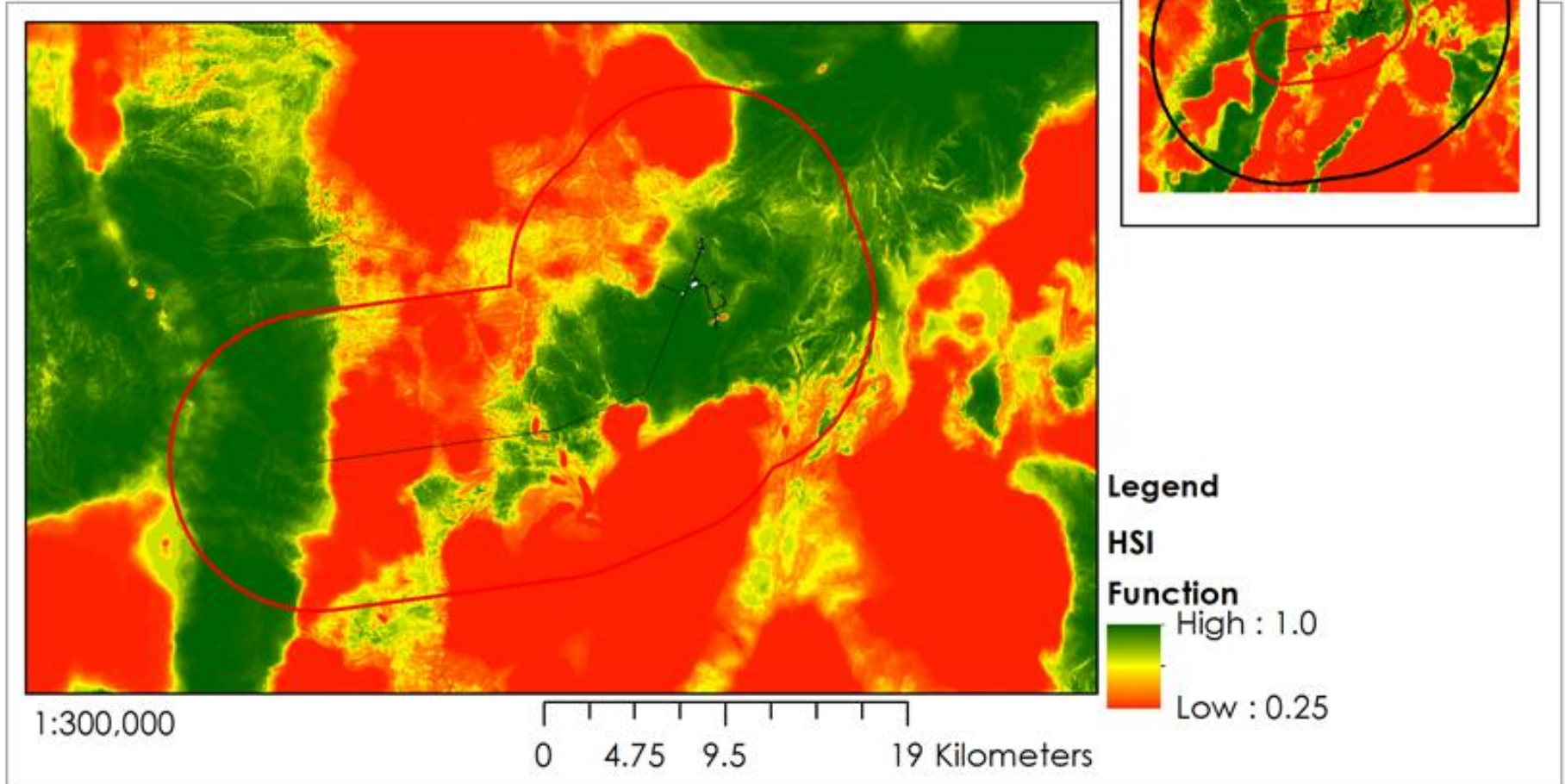
For simplicity, local scale attributes are also assessed within the Analysis Area. This can also allow project proponents to understand how relocating or expanding a project can decrease debits or increase credits.

Anthropogenic Disturbance



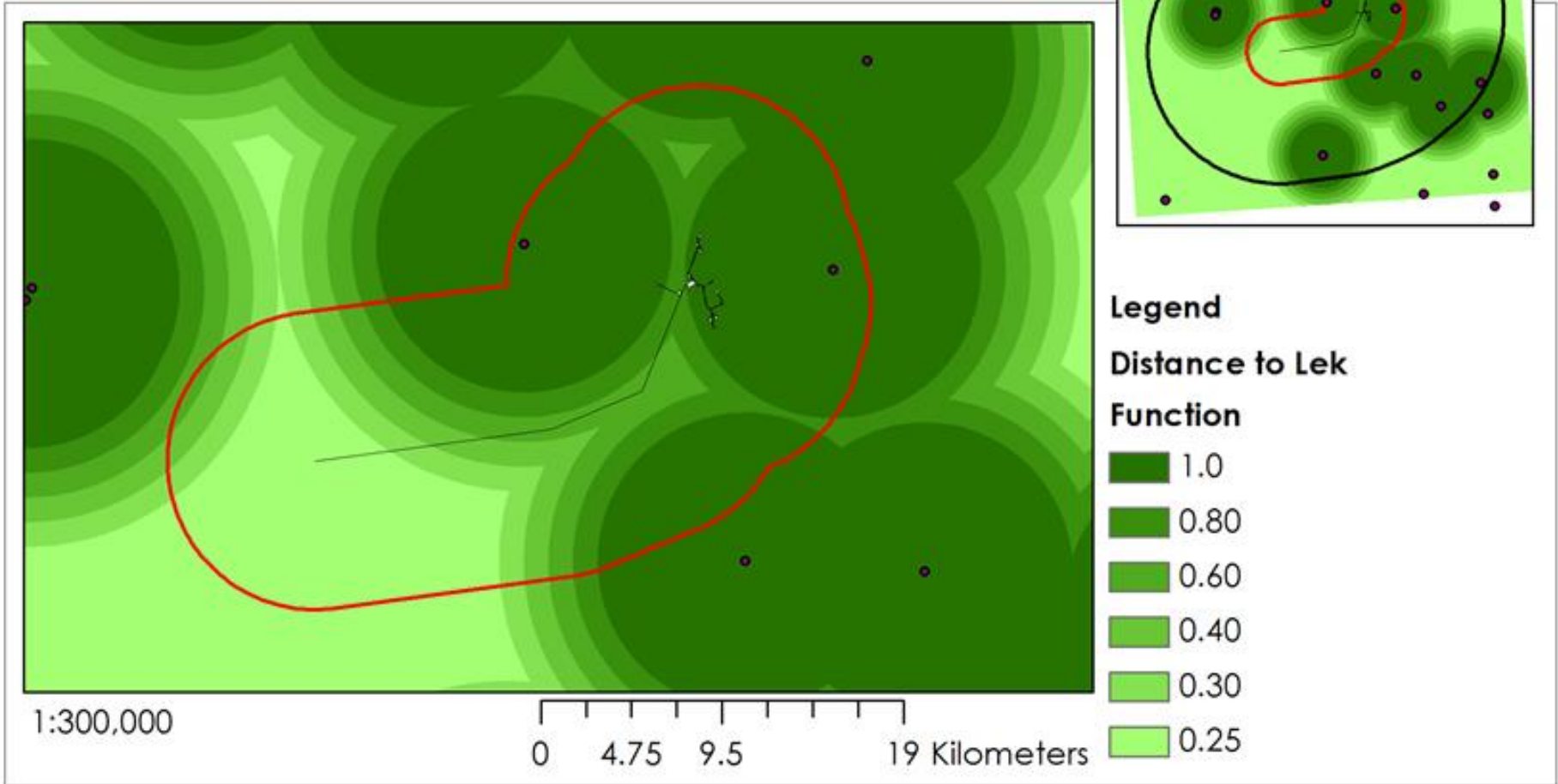
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	4%				

Habitat Suitability Index



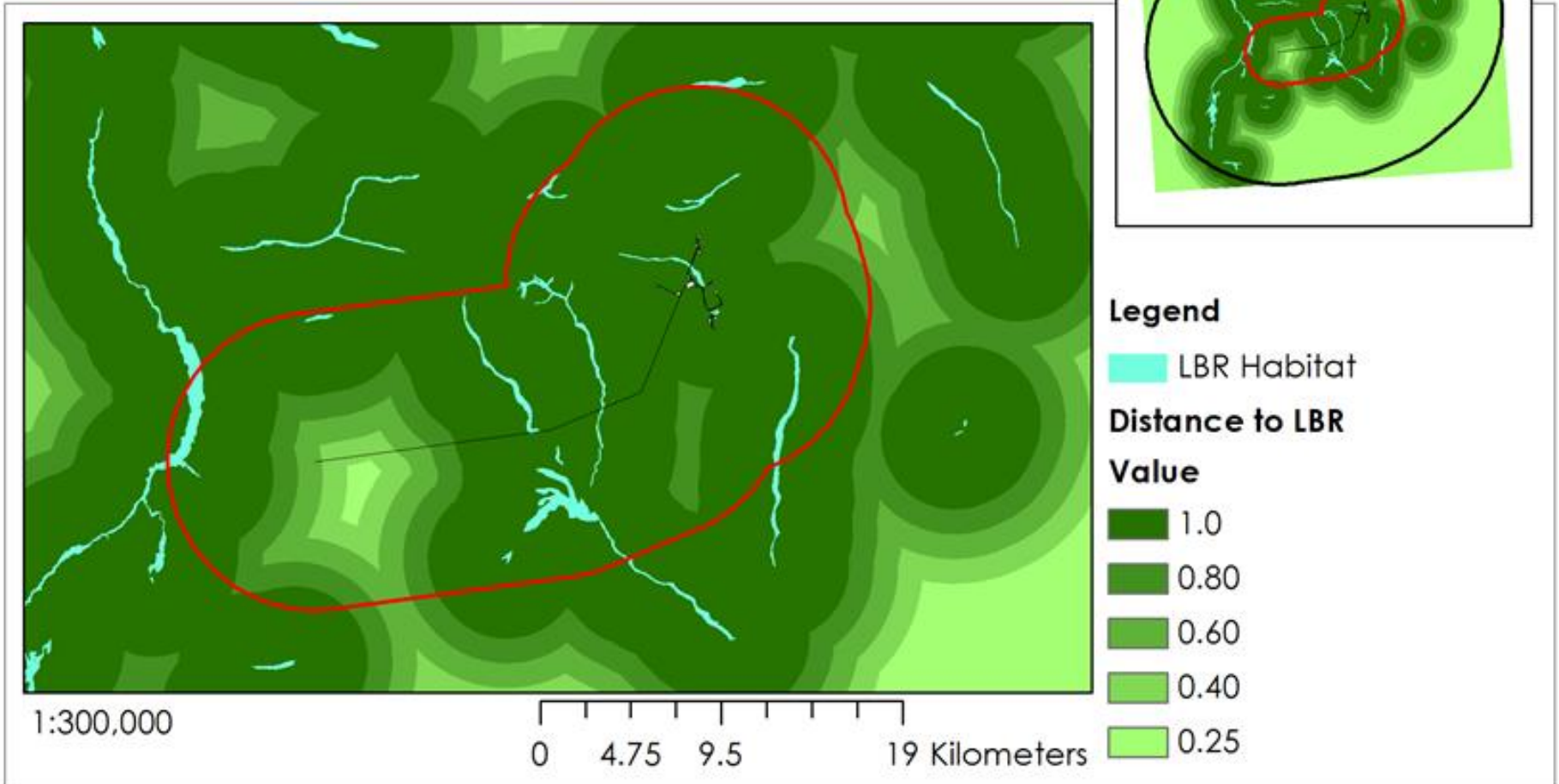
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	4%				

Distance to Lek (Breeding)



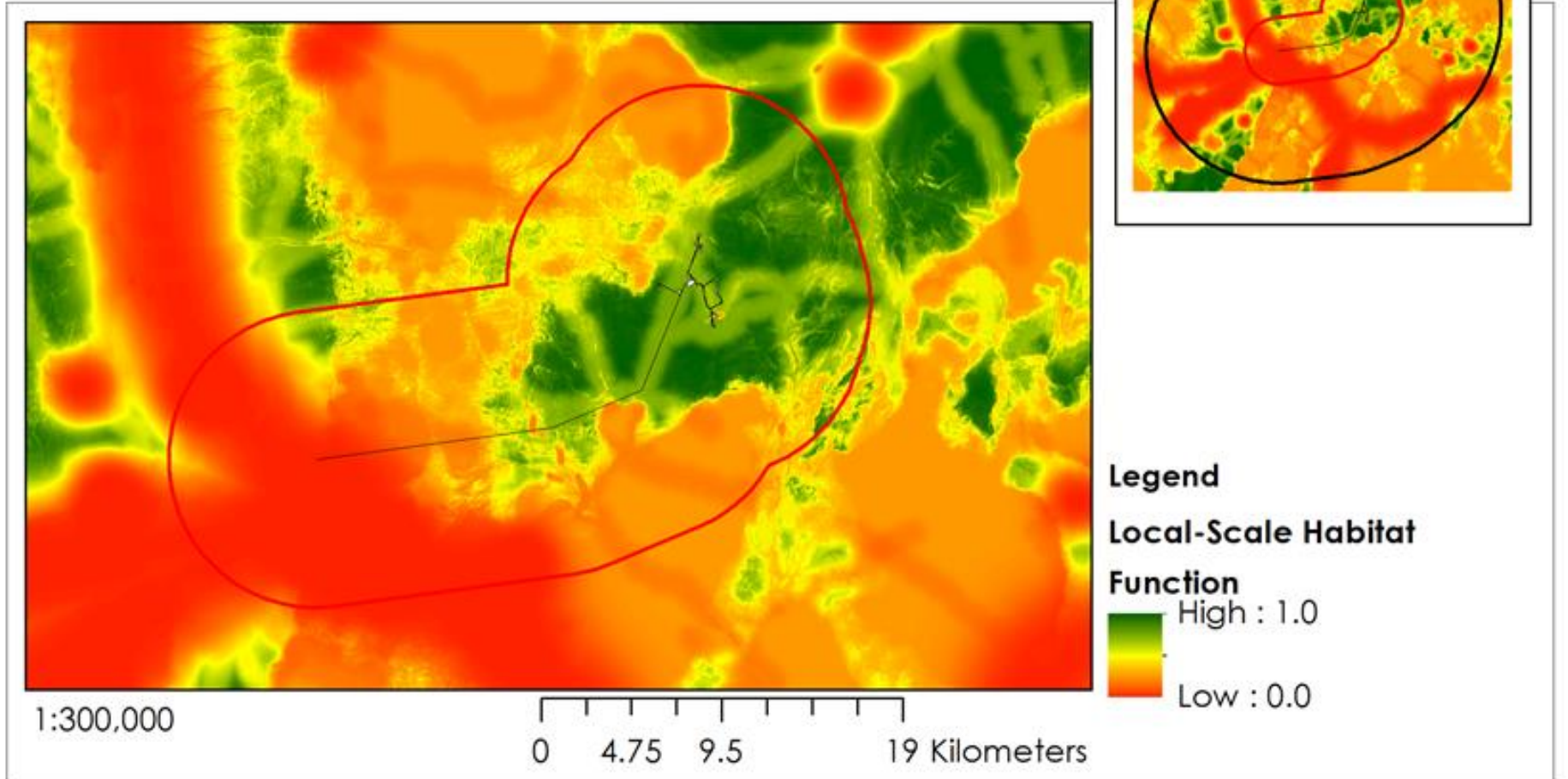
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	4%				

Distance to LBR (Breeding)



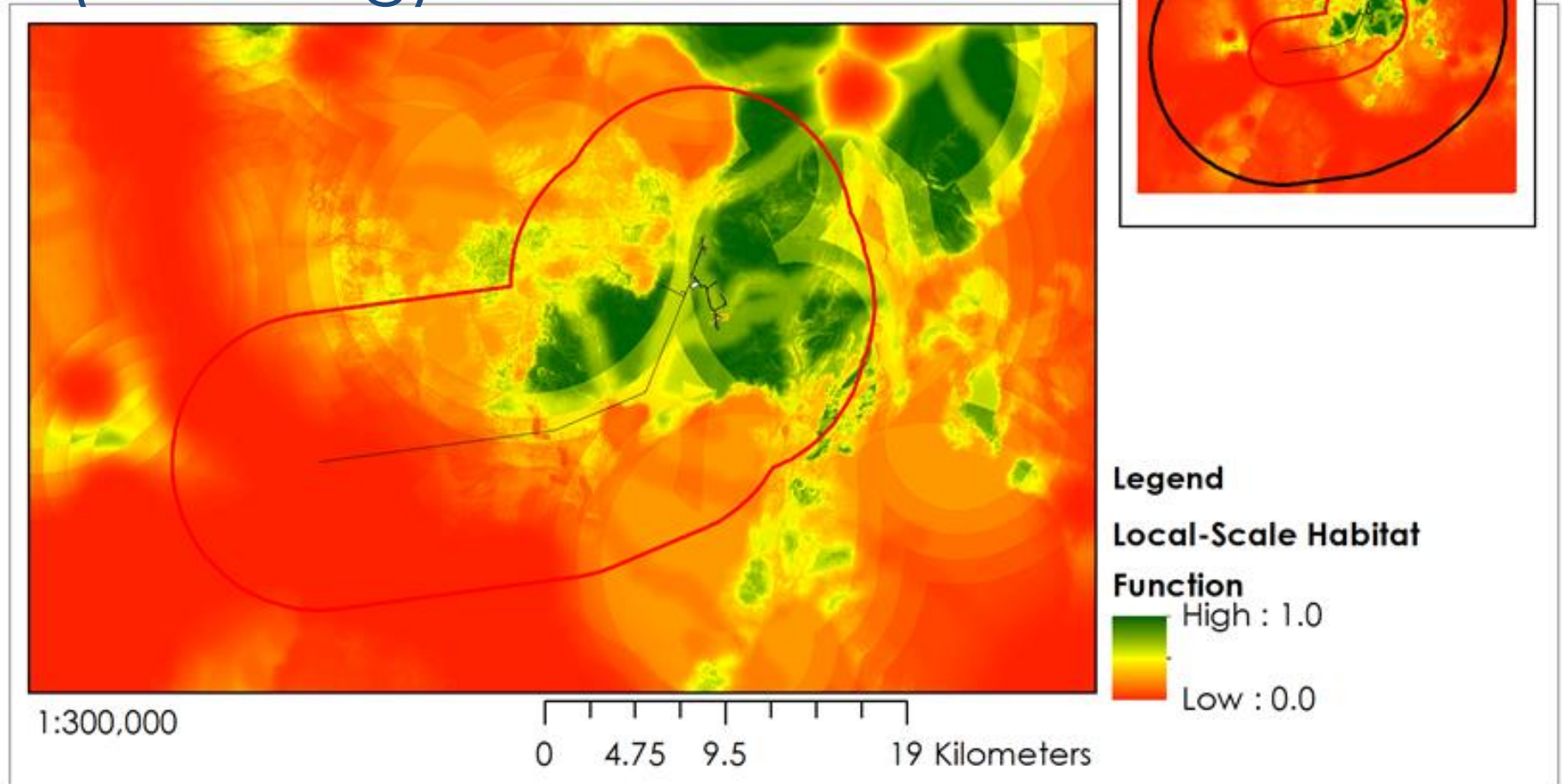
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	4%				

Local-Scale Habitat Function (LBR and Winter)



Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	4%	0.39			

Local-Scale Habitat Function (Breeding)

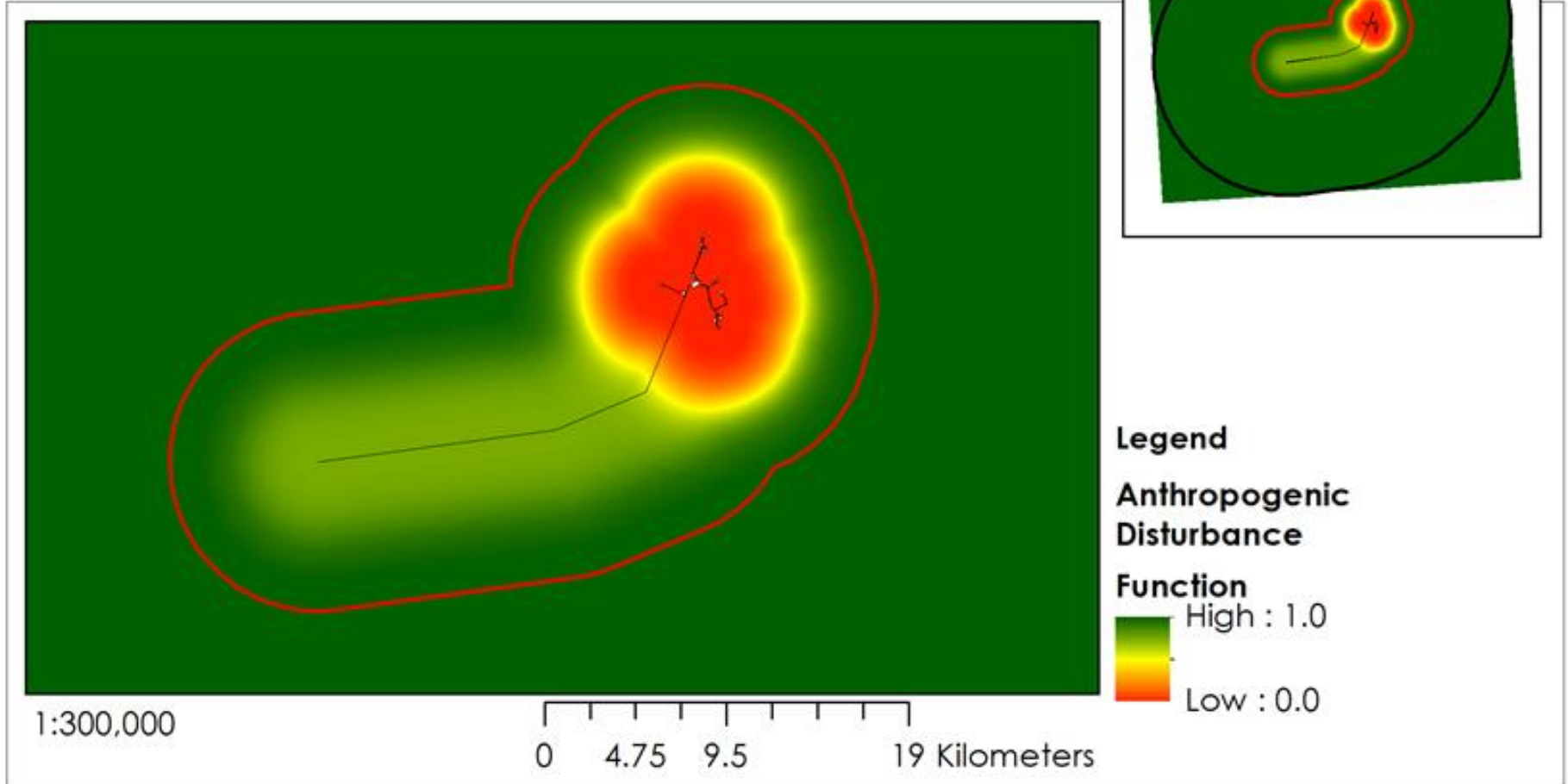


Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	4%	0.33			

Post-Project Analysis

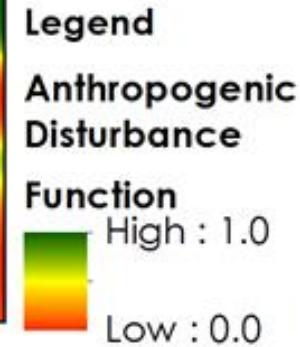
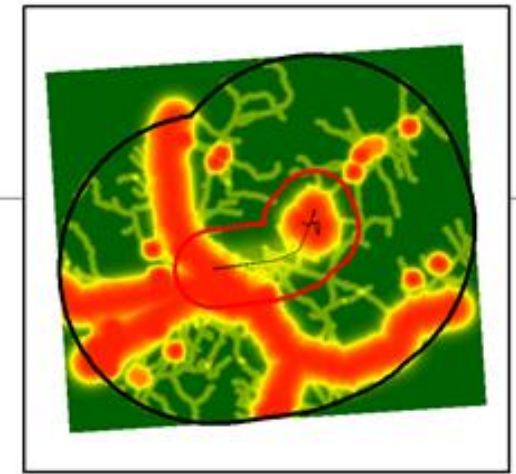
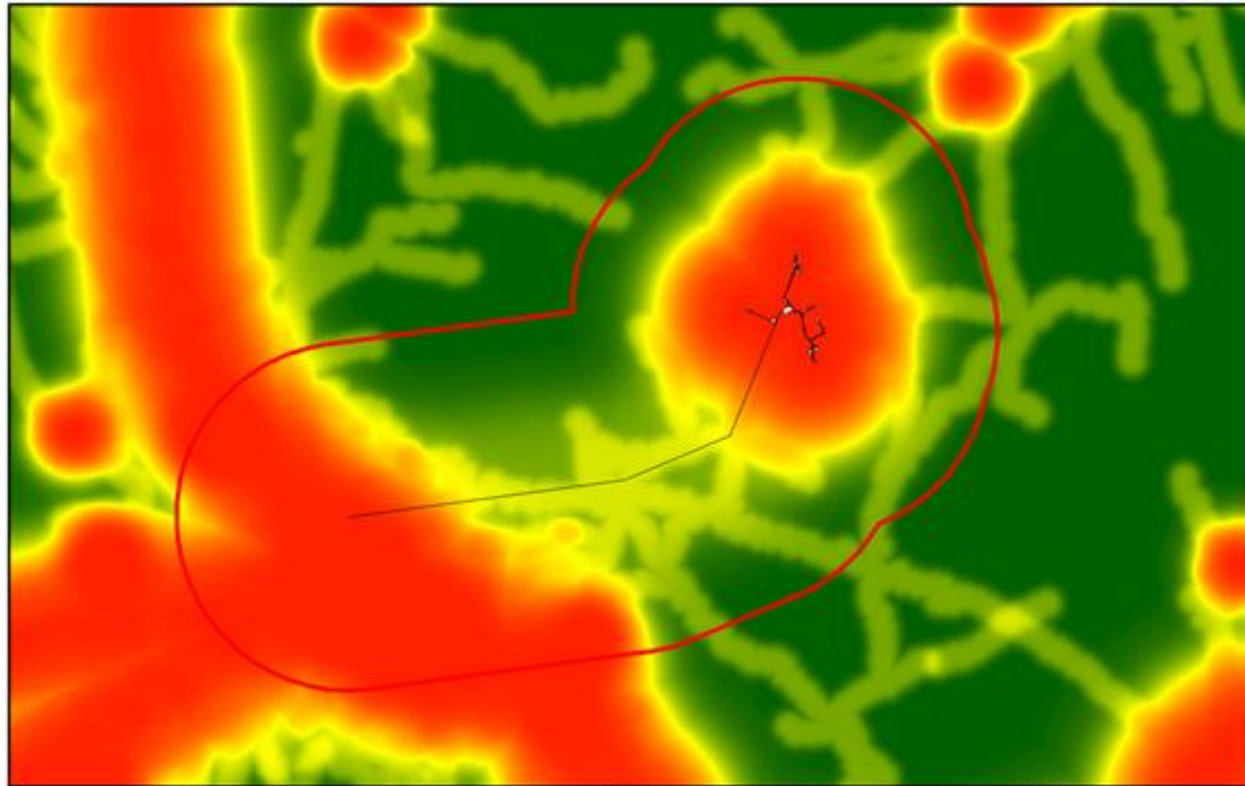
- Anthropogenic Disturbance
- Limiting Seasonal Habitat
- Local-Scale Habitat Function

Anthropogenic Disturbance – Post Project



Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	4%	0.39			

Anthropogenic Disturbance – Post Project

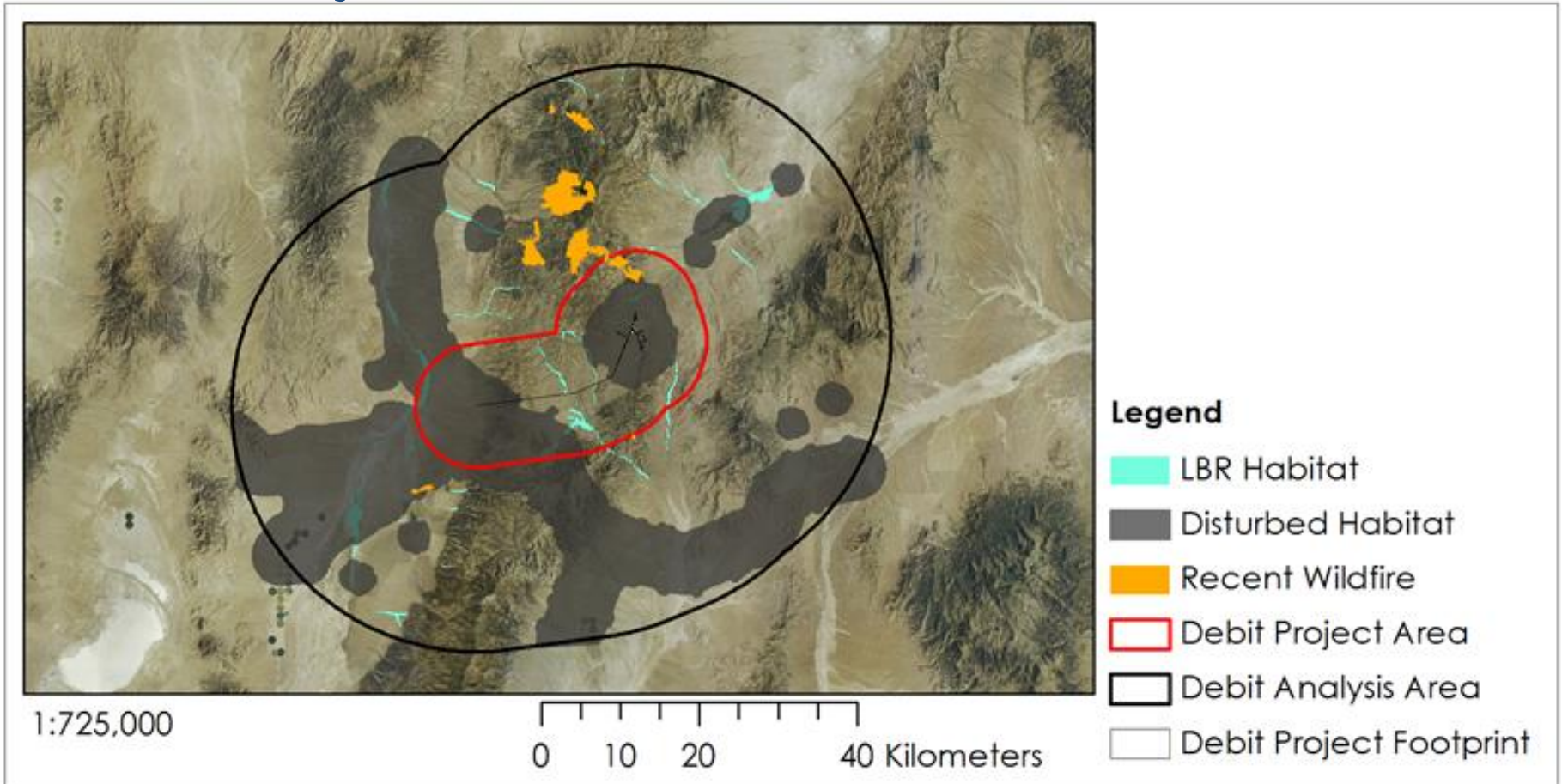


1:300,000

0 4.75 9.5 19 Kilometers

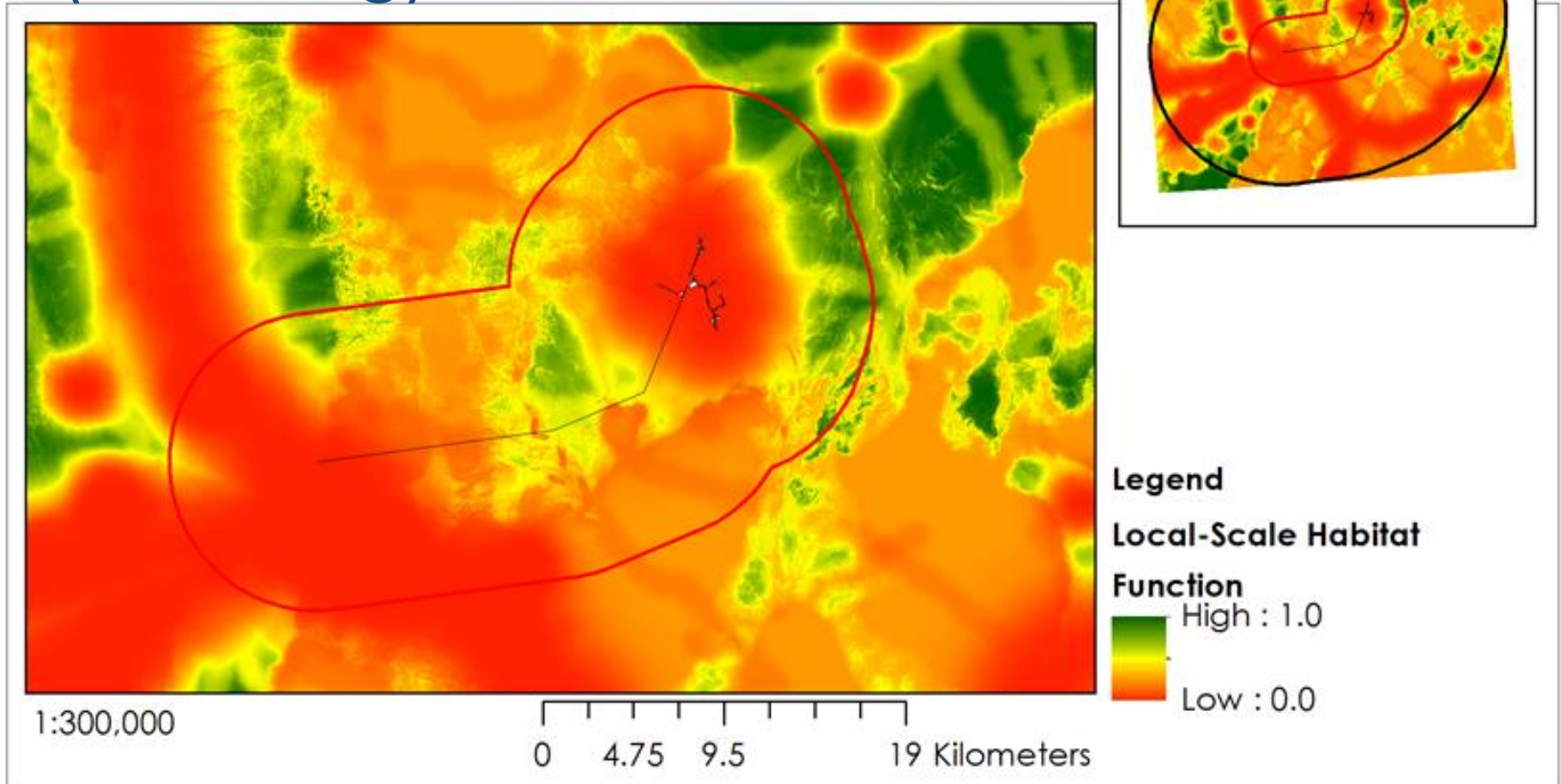
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	4%	0.39			

Limiting Seasonal Habitat– Post Project



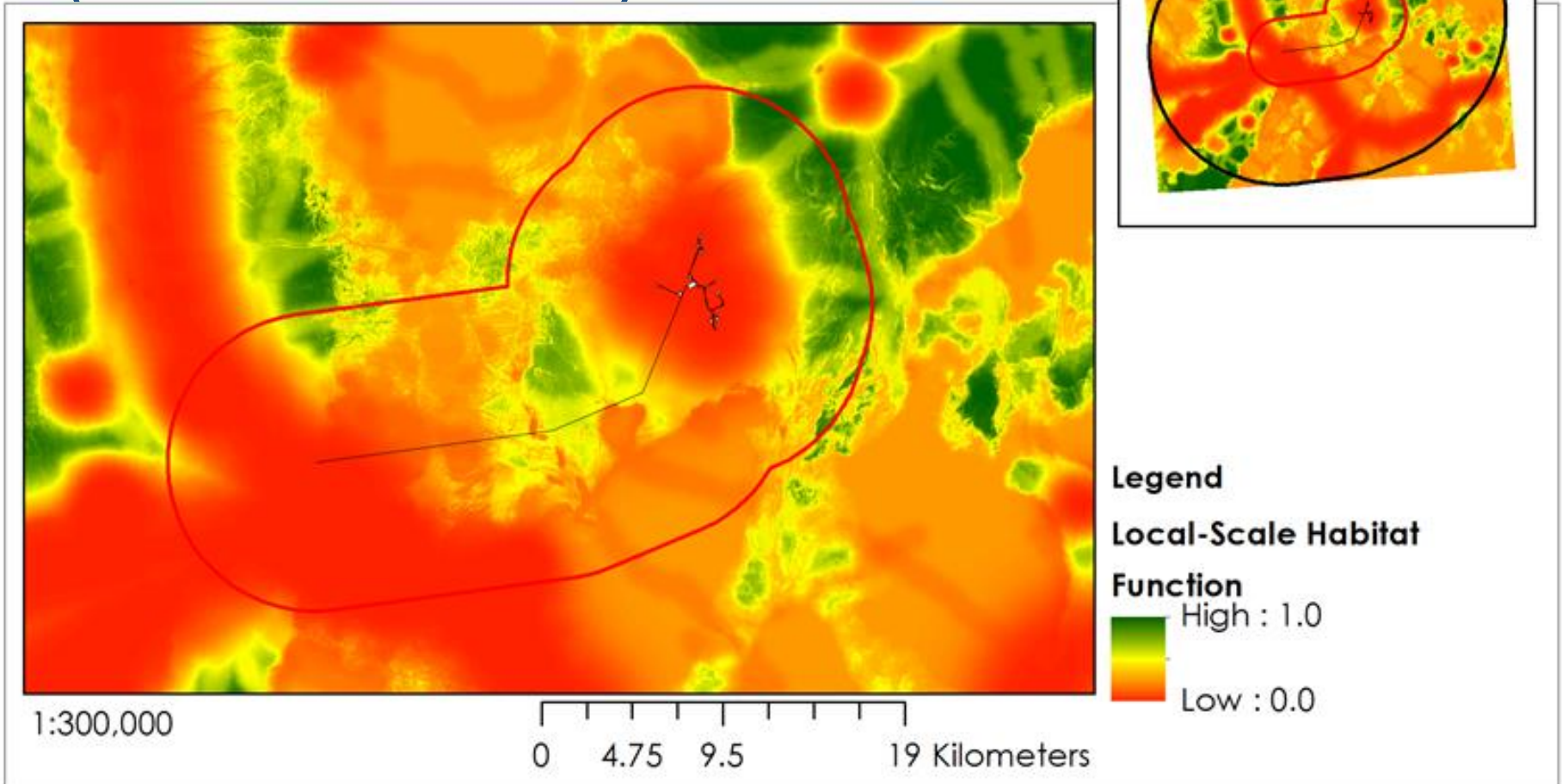
Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	45	Core	3% (Limiting)	0.39			

Local-Scale Habitat Function (Breeding) - Post



Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	3% (Limiting)	0.24			

Local-Scale Habitat Function (LBR and Winter) – Post



Map Unit	Acres	Management Category	Proportion Late Brood-rearing	Local Scale Function	Site Scale Function	Habitat Function	Functional Acres
1	17	Core	3% (Limiting)	0.20			

2

Conduct Field Visits

- Confirm location of any anthropogenic structures
- Collect field data using the datasheet

Collect Field Data

- Breeding: 4/1 – 6/15
- Late Brood-Rearing: 7/1 – 9/15

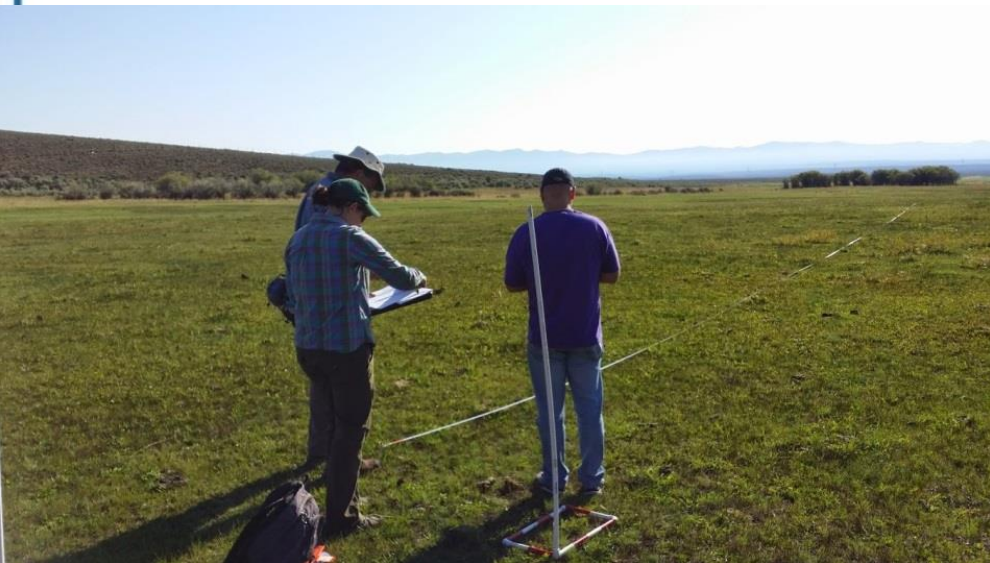
SEIT
 STATE ORNITHOLOGICAL MEASUREMENTS

City Name: WILLOW CREEK
 Date: 9/24/14 Plum ME 11:20 AM
 Map Grid #: 3
 Transect #: 1 Transect Length: 114.931 Transect Width: 1119° 52.412
 Transect N. Chpt: 0.95 Transect Agent: AL Transect Sample Bearing: 320
 Observer / Photo #s: GP

Plot #	Herb Plant Sp.	Herb Plant Sp. % Cover	Plot #	Herb Plant Sp.	Herb Plant Sp. % Cover	Plot #	Herb Plant Sp.	Herb Plant Sp. % Cover
	C. ingueta	12	2	PE1	10	3	NEB sedge	25
	PE1	5		Red Top	10		Ko. triflorus	5
	bold's Rush	5		NEB sedge	25	4	C. ingueta	40
	Kenilworth Rush	2		Ko. triflorus	30		Karunkulus	5
	Ko. triflorus	20		bold's Rush	5		Gallium spp.	1
	NEB sedge	5		PE2 Karunkulus			PE1	1
2	C. ingueta	8	3	Karunkulus spp.	3		Red Top	20
	Erigeron spp.	1					NEB sedge	25
	Karunkulus spp.	3		PE1	10		bold's Rush	5
3	Carduus	1		Veronica spp.	1	5	Gallium spp.	2
5	Veronica spp.	3						
	Carduus	1						
	Erodium	1						
	Rush spp.	15						
	NEB sedge	20						
	Red Top	2						
	Poa trivialis	2						

4.95 m
 Rush spp. Karunkulus, sm
 sedge (8-10cm)

what was called PE2 on 4/20 is actually Karunkulus spp. Karunkulus spp. reed plantations



3

Calculate Debits

- Estimate post-project habitat function
- Calculate breeding, summer, and winter habitat function difference between post-project and baseline for each map unit

- Pre-project habitat function
- Post-project estimated habitat function
- Mitigation Ratio
- Proximity Ratio

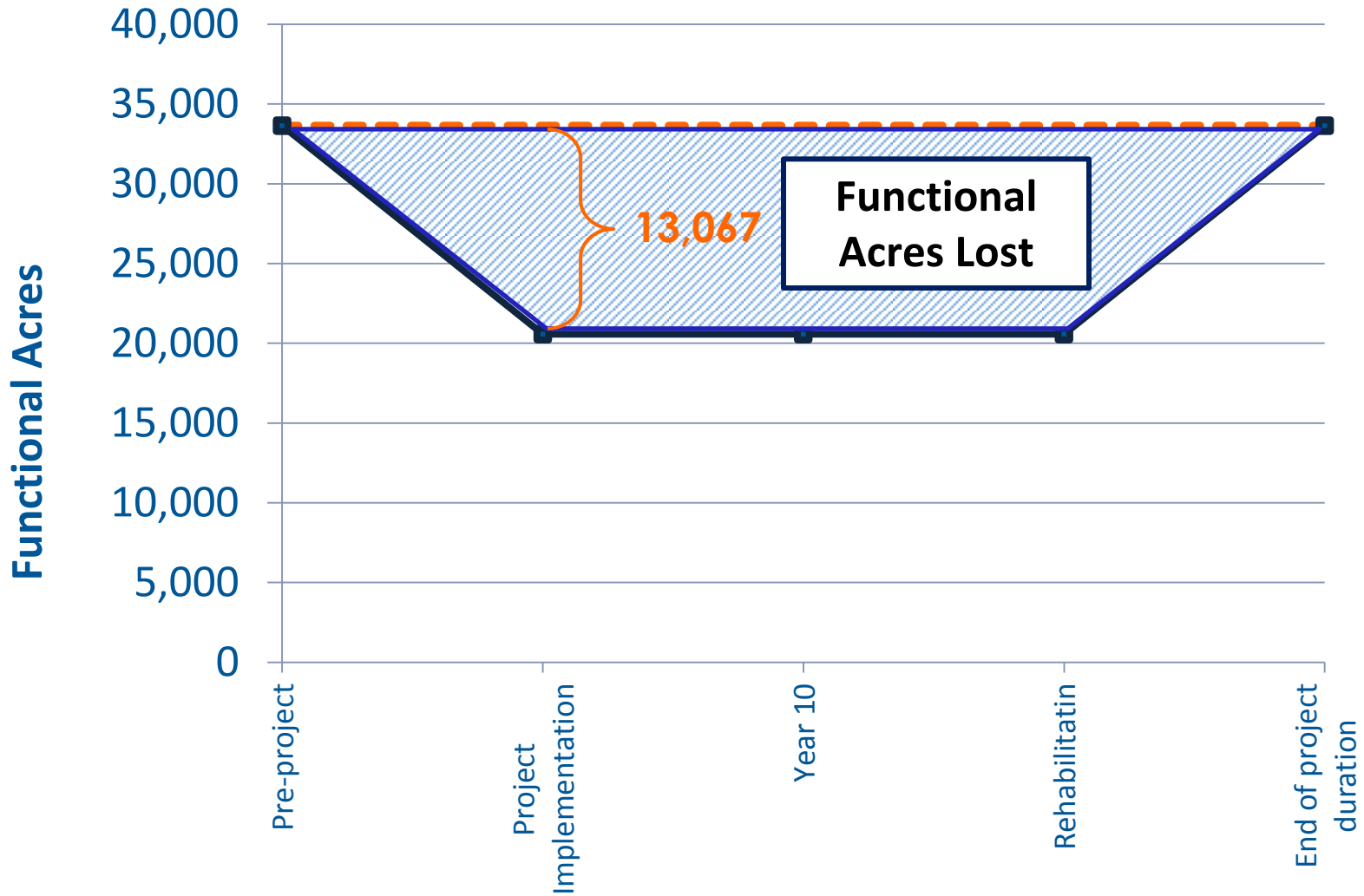


Calculate difference between post-project habitat function and debit baseline habitat function, debits generated and credit obligation

Functional Acre Loss

	Pre-Project	Post-Project
Combined local & site-scale average habitat function	36%	22%
Functional acres	33,632	20,565
	Functional Acres Loss	13,067

Functional Acres Impacted



Debit Calculation

	Functional Acres Loss	Average Management Importance Ratio	Average Limiting Seasonal Habitat Ratio	Average Combined Mitigation Ratio	Debits Generated
Late Brood-Rearing	557	1.5	0.0	1.5	835
Breeding	5,550	1.5	0.0	1.5	8,325
Winter	6,960	1.5	0.0	1.5	10,440
	13,067				19,600

Credit Obligation Calculation

	Debits Generated	Proximity Ratio	Credit Obligation
Late Brood-Rearing	835	1.25	1,044
Breeding	8,325	1.25	10,406
Winter	10,440	1.25	13,051
	19,600		24,500

*See page 30 of the Manual for additional
information on Proximity Ratios*

Debit Project Summary

Acres of Direct Impact: 116

Acres of Indirect Impact: 92,804

Functional Acre Loss: 13,067

Debits: 19,600

Credit Obligation: 24,500

Duration: 30

Debit Project Scenarios

	Very Bad	Current (Moderate)	Good
Acres of Direct Impact	116	116	116
Acres of Indirect Impact	92,804	92,804	92,804
Functional Acre Lost	23,628	13,067	5,104
Debits	121,499	19,600	5,104
Credit Obligation	182,248	24,500	5,104

Very Bad

- Core management category
- Very high habitat function
- 1% limiting seasonal habitat for LBR
- Offset outside of WAFWA Management Zone

Very Good

- General management category
- Low habitat function
- No limiting seasonal habitat
- Offset within PMU

Debit Verification

- Third-party verification
 - Before debit project begins
 - During implementation
 - When debits end/decrease
 - Potential spot checks/audits

SETT
SAGE CRUISE Absolute Measurements

Date: 1/11/14
Site: 822014
Project: ME, F, R, M
Year: 2013
Transect # 1
Transect Date: 1/11/14
Transect UTM: 42, 412
Transect N. Chain: 0.89
Transect Point: AB
Transect Sample Name: 390
Camera / Photo #: 085

Plot #	Mark Plant Sp.	Mark Plant Sp. to Center	Plot #	Mark Plant Sp.	Mark Plant Sp. to Center	Plot #	Mark Plant Sp.	Mark Plant Sp. to Center
1	C. rostrata	12	2			10		
	PE1	5				11		
	2013 RUSH	5				12		
	2013 RUSH	2				13		
	2013 RUSH	20				14		
	2013 RUSH	5				15		
	2013 RUSH	8				16		
	2013 RUSH	10				17		
	2013 RUSH	10				18		
	2013 RUSH	10				19		
	2013 RUSH	10				20		
	2013 RUSH	10				21		
	2013 RUSH	10				22		
	2013 RUSH	10				23		
	2013 RUSH	10				24		
	2013 RUSH	10				25		
	2013 RUSH	10				26		
	2013 RUSH	10				27		
	2013 RUSH	10				28		
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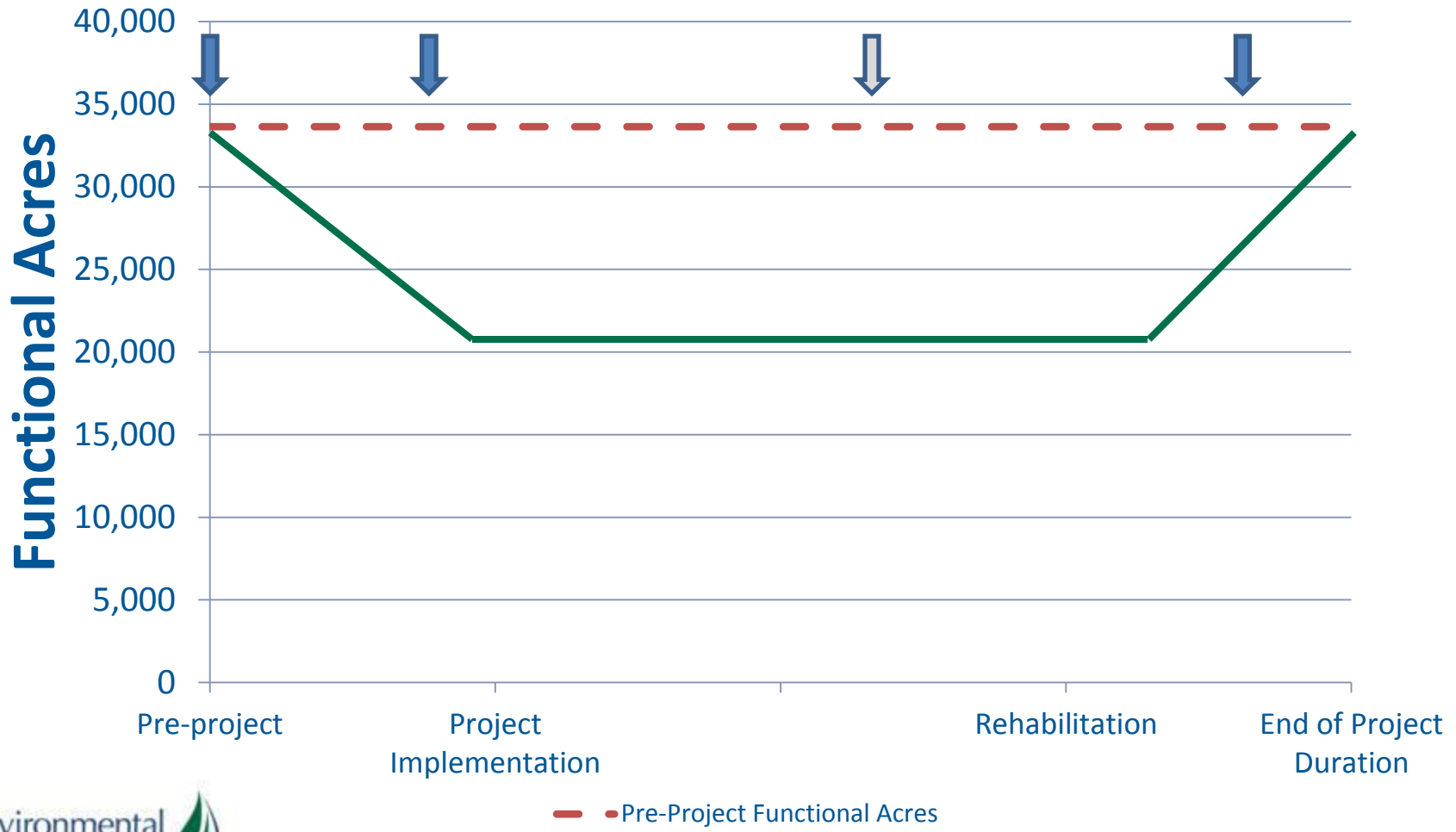
4.95m
what was called PE2 on 4/20 is actually Ranunculus spp.!

See page 51 of the Manual for additional information on Debit Site Verification

Debit Verification

Verification ↓

Spot Checks & Audits ↓



Track &
Transfer

Acquire
Credits

Determine
Credit Need

Indicate
Interest

- Purchase credits
- Create registry account

Investment Strategy

- Buyer is provided Credit Developers willing to provided quantity of credits required by Administrator
- Buyer reaches price and payment terms with each individual Credit Developer

Track &
Transfer

Acquire
Credits

Determine
Credit Need

Indicate
Interest

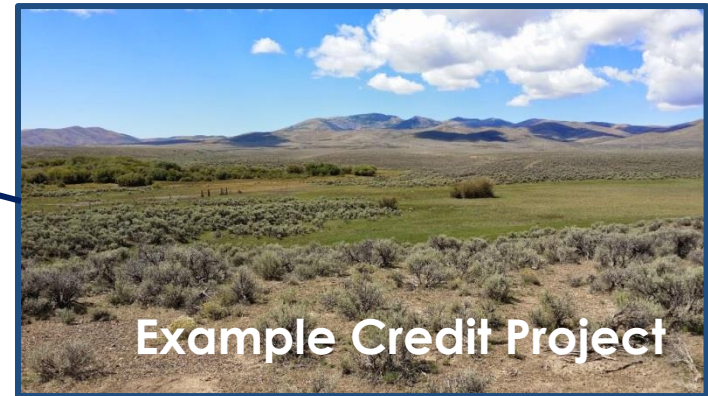
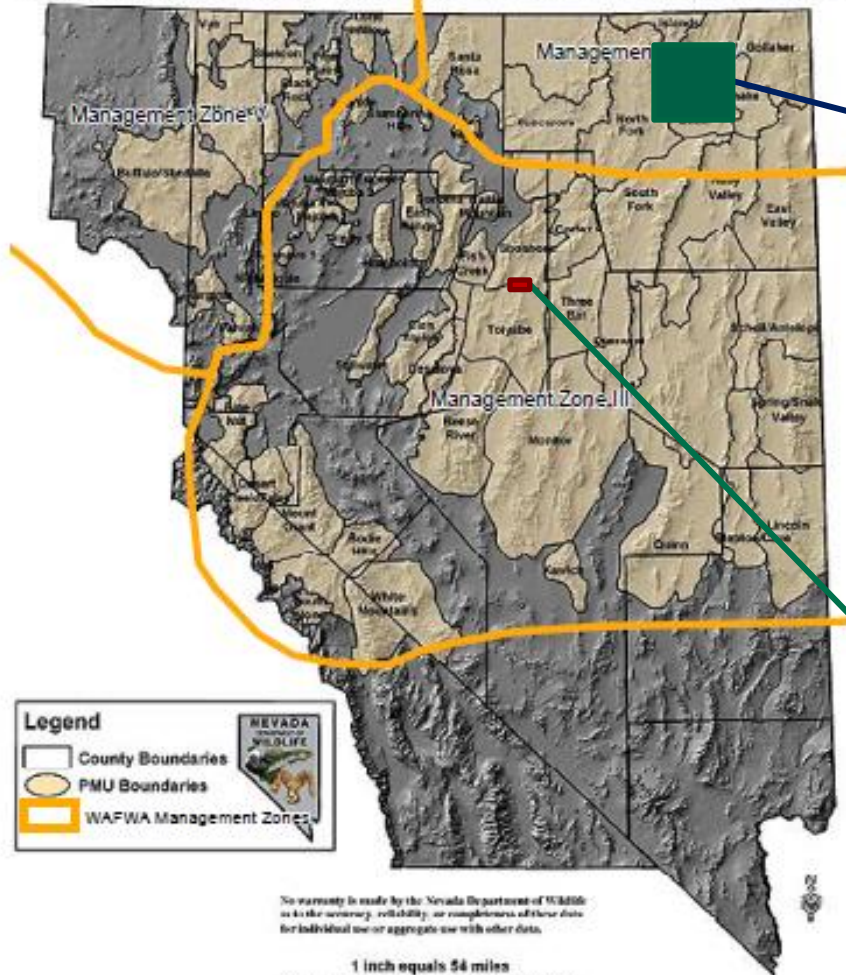
- Conduct post-project third-party verification
- Report accomplishments

Other Debit Project Considerations

- Regulatory Assurances

Conservation Area to Direct Impact Area

Sage Grouse Population Management Units (PMUs)



Report Accomplishments

