



A REPORT TO THE
Board of Natural Resources
AUGUST 18, 2017

Presented By:

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— Work to date

1994-1997	Habitat Relationship studies
1997	State Lands HCP Adopted – Interim Strategy initiated
1997-2009	Inventory surveys - ~15,000+ surveys conducted
2004-2008	Science Team
2012	Scoping – Phase One
2013	Scoping – Phase Two
2015	Alternatives Adopted
2015	Analytical Framework Presented
2015	Population Modeling Presented
2016	Published Draft EIS



April: Summary of public comments



May: MM/SHC background and deferral summary



June: MMLTCS/Arrearage/Riparian and decision process



July: Financial analysis and proposed alternatives



August: 2-day BNR retreat



September: BNR selects a preferred alternative

2017

2018

2019

Sep

Apr

July

Feb

Selection of alternative

Work on SDEIS

Release Supplemental DEIS

60 day Public Comment Period

Work on Final EIS

Release Final EIS

Work on HCP Amend.

Submit HCP Amendment To USFWS

60 day Public Comment Period

Work on Final Amendment

Submit Final HCP Amendment To USFWS

Outdated Timeline

from June BNR Presentation

Timeline

- July 2017: Preferred Alternative
- March 2018: Publish FEISs
- April 2018: **BNR Decision on amendment to submit to USFWS**
- October 2018: USFWS approvals
- November 2018: **BNR adoption**
 - Marbled murrelet long-term conservation strategy
 - Sustainable harvest level

Why the new timeline?

- Preferred Alternative delayed until September
- Added Supplemental DEIS
- Added 60-day comment period

Marbled Murrelet



Need

DNR needs to obtain long-term certainty for timber harvest and other management activities on forested state trust lands, consistent with commitments in the HCP and DNR's fiduciary responsibility to the trust beneficiaries

Purpose

To develop a long-term conservation strategy for marbled murrelets on forested state trust lands in the six west-side planning units, subject to DNR's fiduciary responsibility to the trust beneficiaries as defined by law, and USFWS's responsibilities under the ESA.

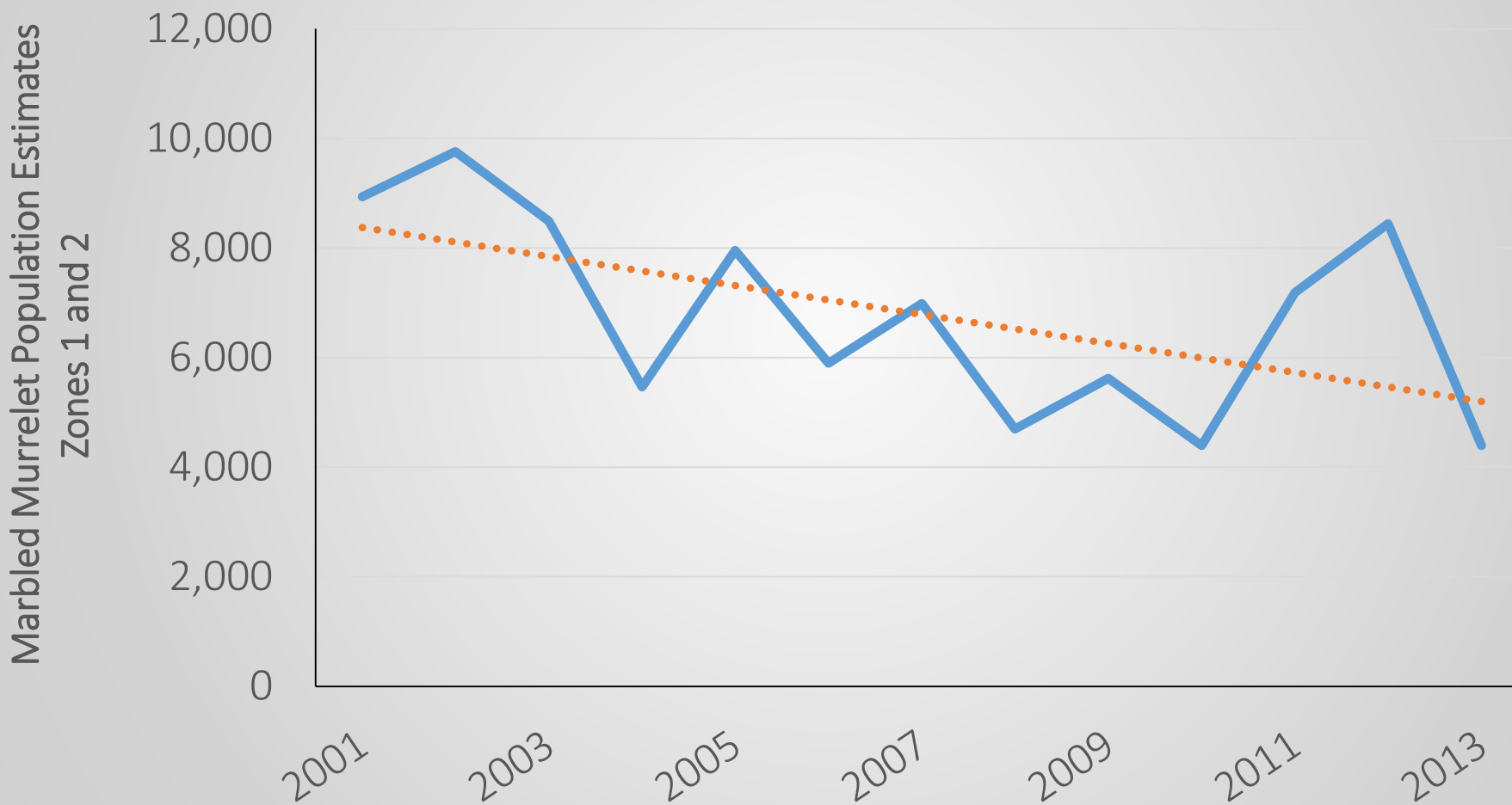
Objectives

1. Trust Mandate
2. Marbled Murrelet Habitat
3. Active Management
4. Operational Flexibility
5. Implementation Certainty

- MMLTCS DEIS



Plight of the murrelet



Ultimately, the applicant must develop a conservation program that includes both minimization and mitigation measures in a manner that **fully offsets the impacts** of the taking.

- HCP Handbook



How to offset impacts

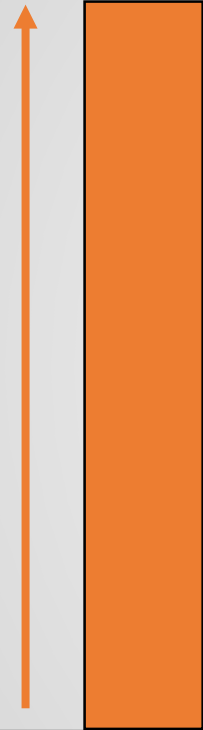
Minimize our
impact



Provide
mitigation

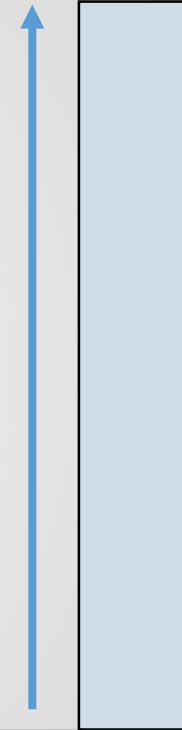


If our
impact
increases



Impact

So should
our mitigation



Mitigation



If we keep
impact
low



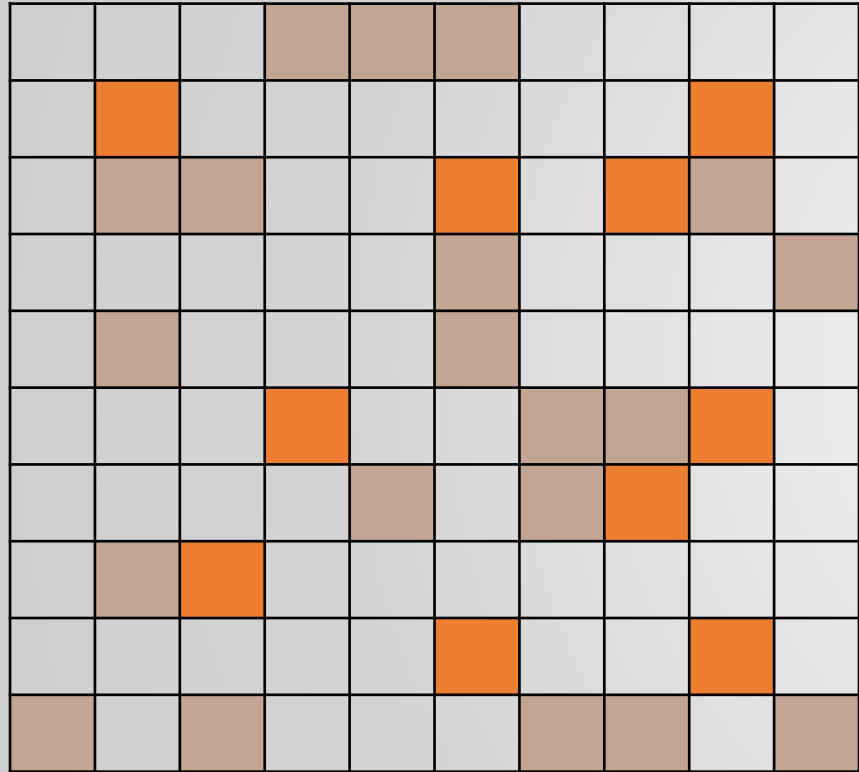
Impact

Mitigation can
stay low



Mitigation







Minimization and Mitigation Example



In this example:

-  Current Habitat Habitat credit = 1
-  Future Habitat Habitat credit = 0.5

Rules

Harvesting **current habitat** counts as Impact.

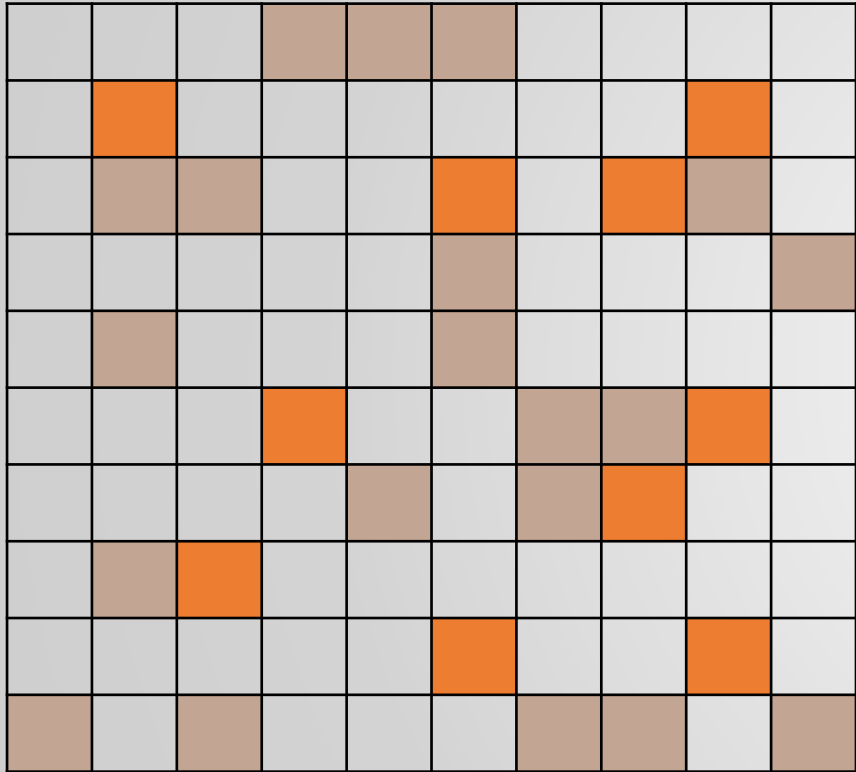
Harvesting **future habitat** does not count as Impact.

Preserving **current habitat** does not count as Mitigation.

Preserving **future habitat** counts as Mitigation.

Note: For details on the analytical framework please refer to the DEIS and past BNR presentations. This example is solely to depict one component of the analytical framework in a simplified manner.



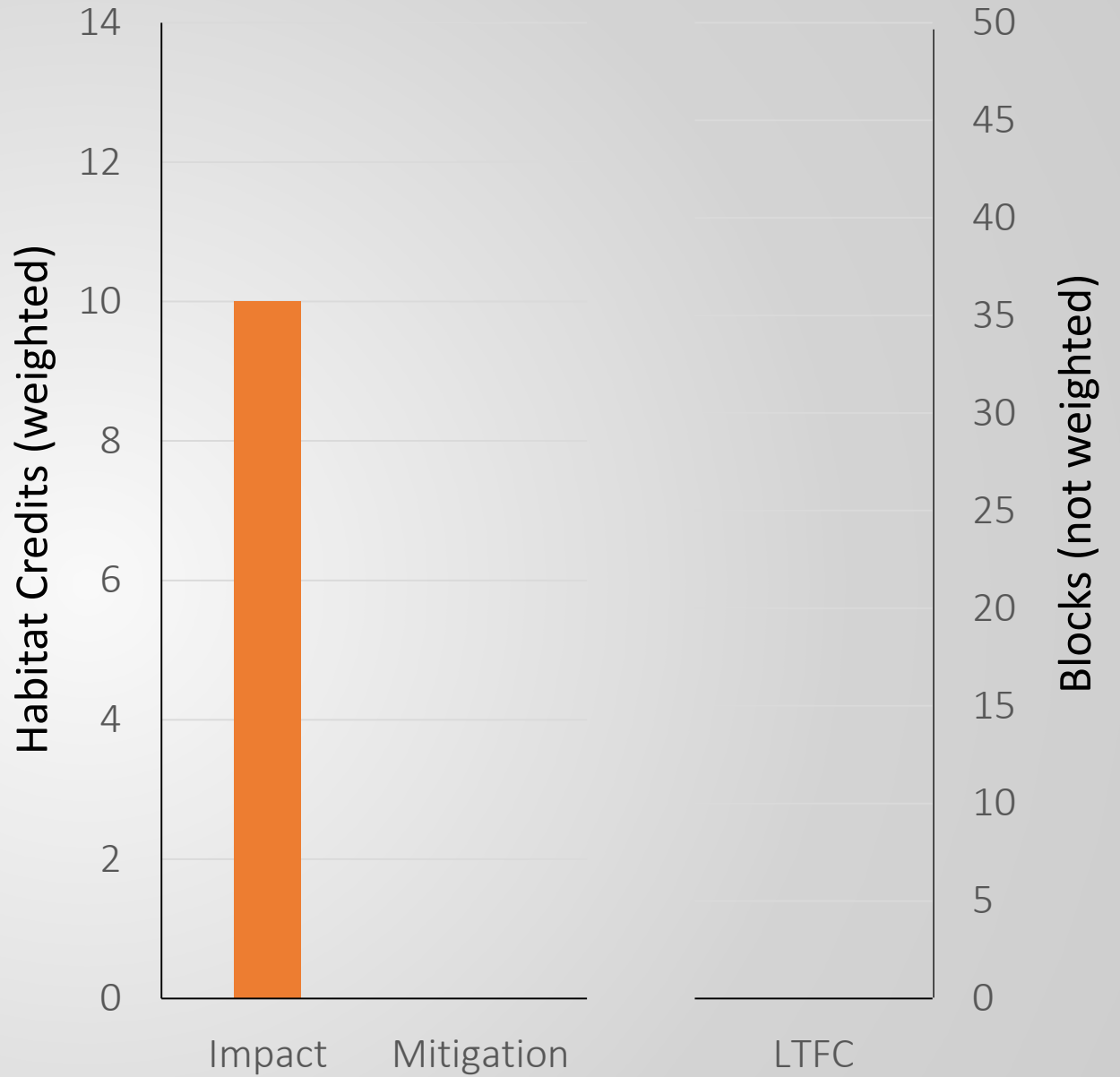
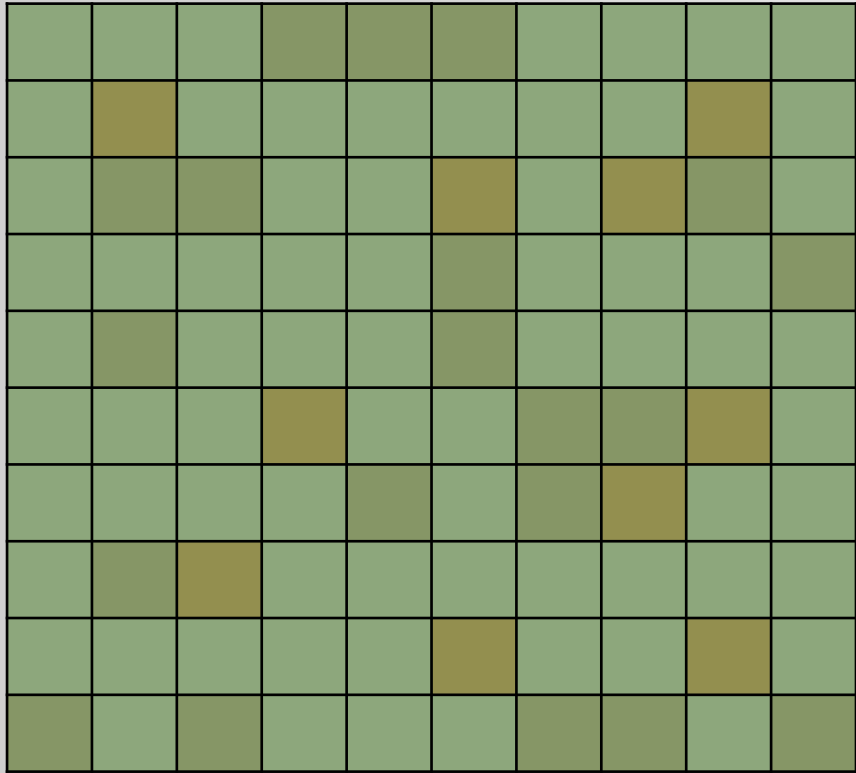


There are 10 **current habitat** blocks (10 credits)

There are 20 **future habitat** blocks (10 credits)



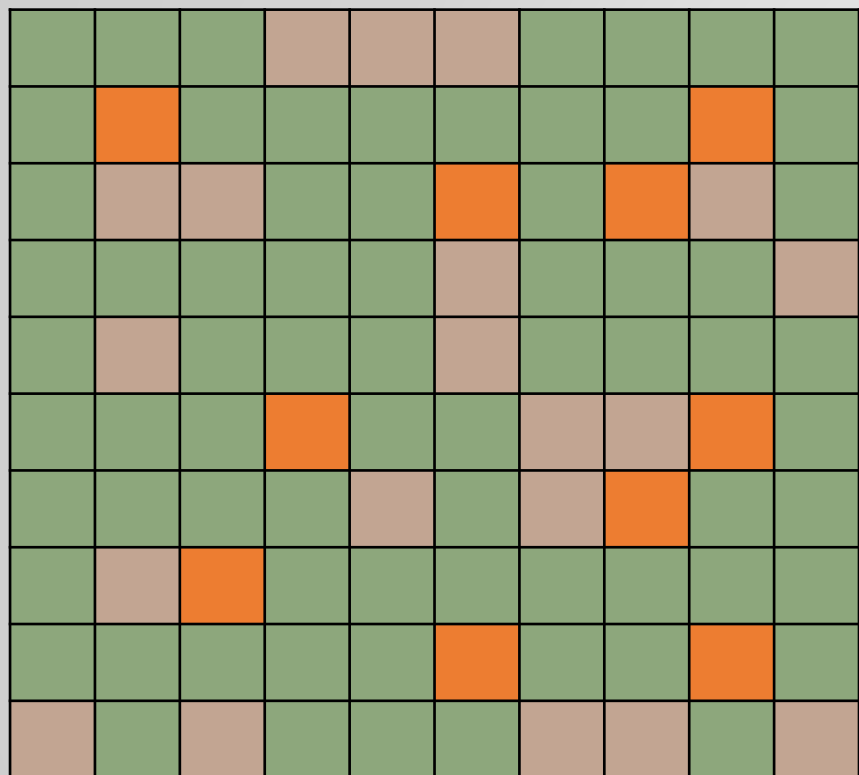
Harvest Everything



Removing habitat (impact), and not allowing new habitat to grow (no mitigation).

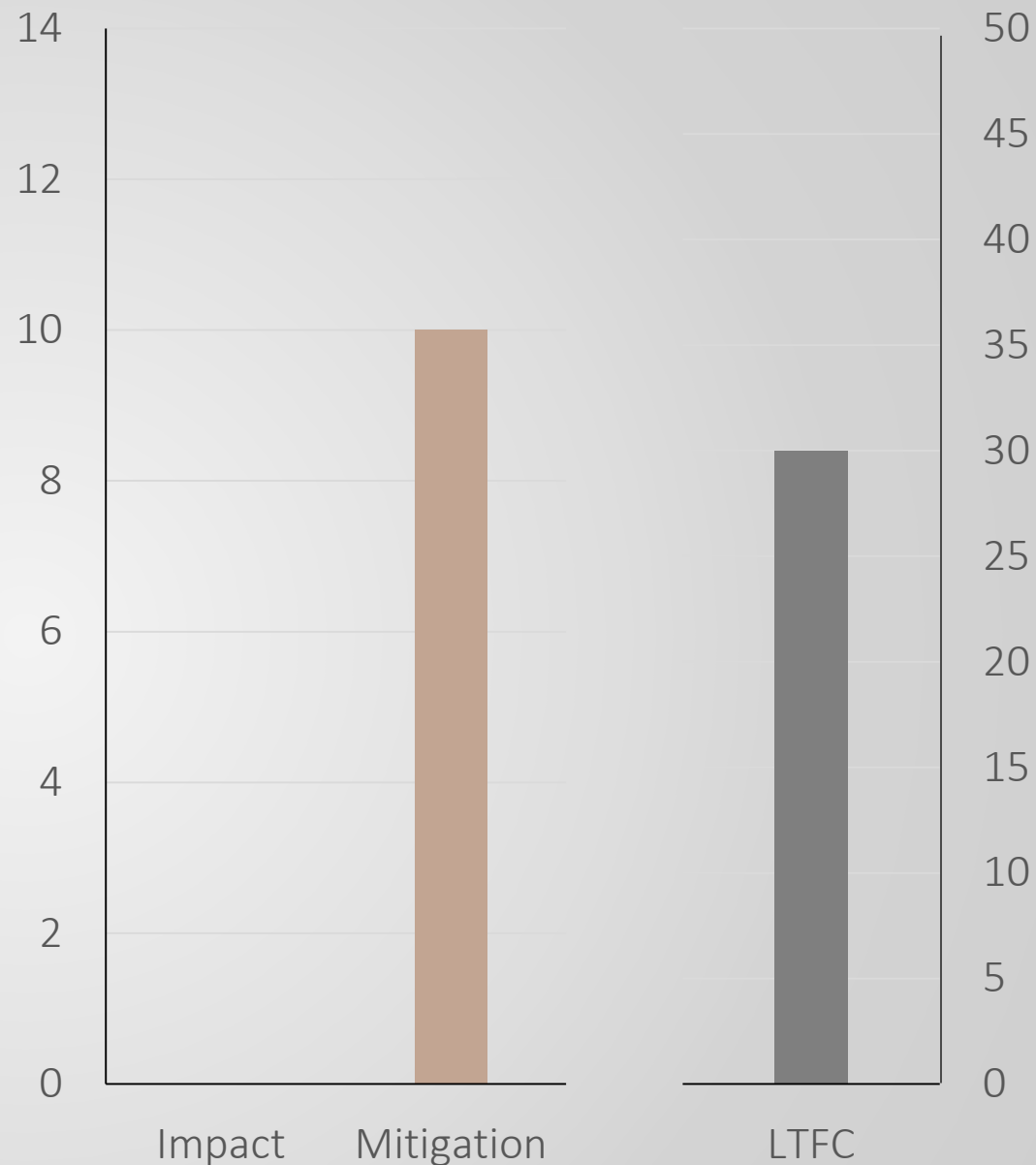


Harvest no current or future habitat.

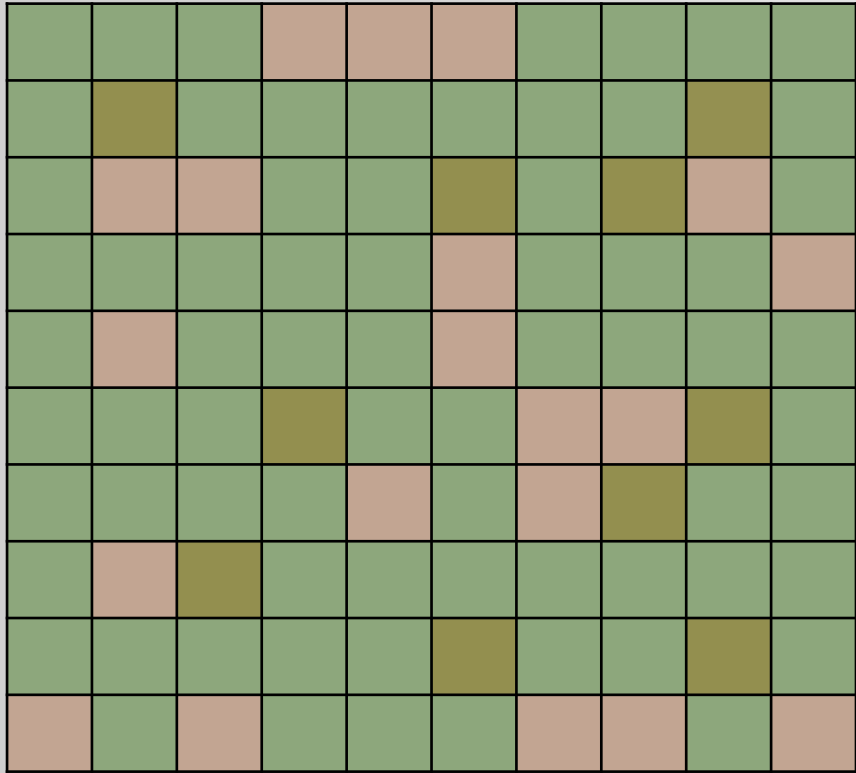


No harvest of habitat (no impact), allow growth of future habitat (mitigation).

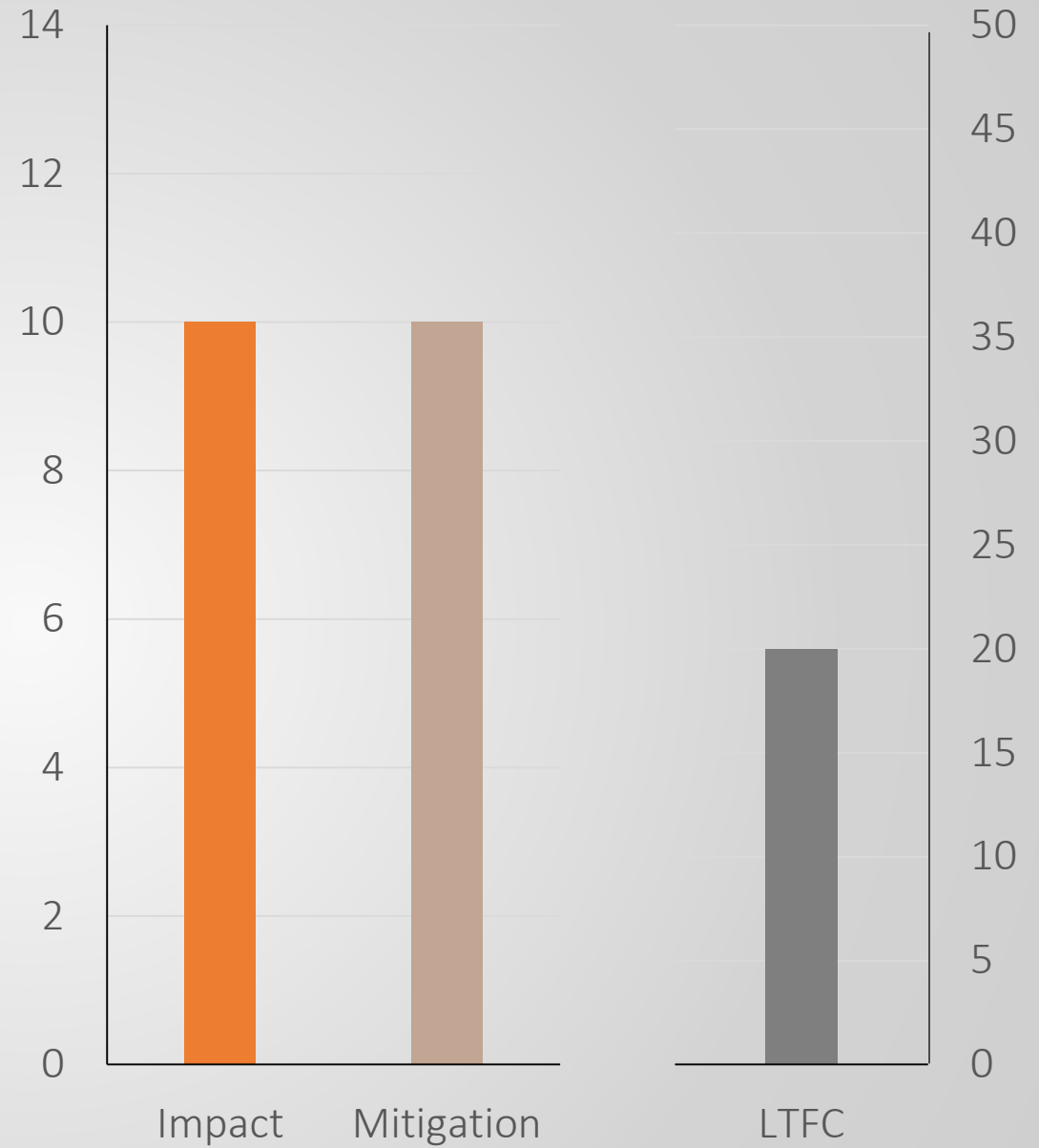
High LTFC.



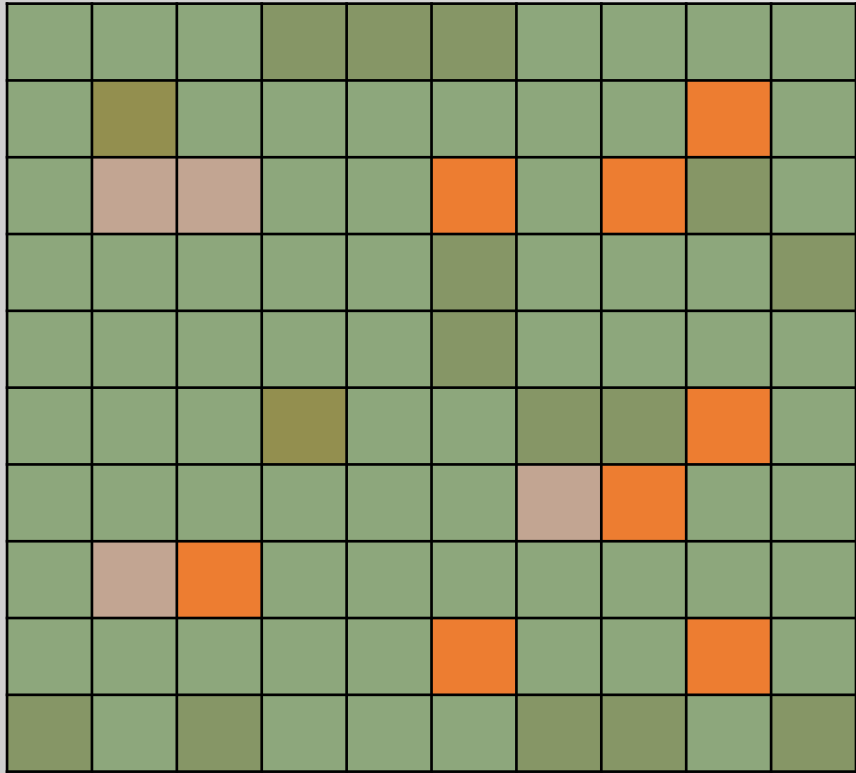
Mitigation Approach



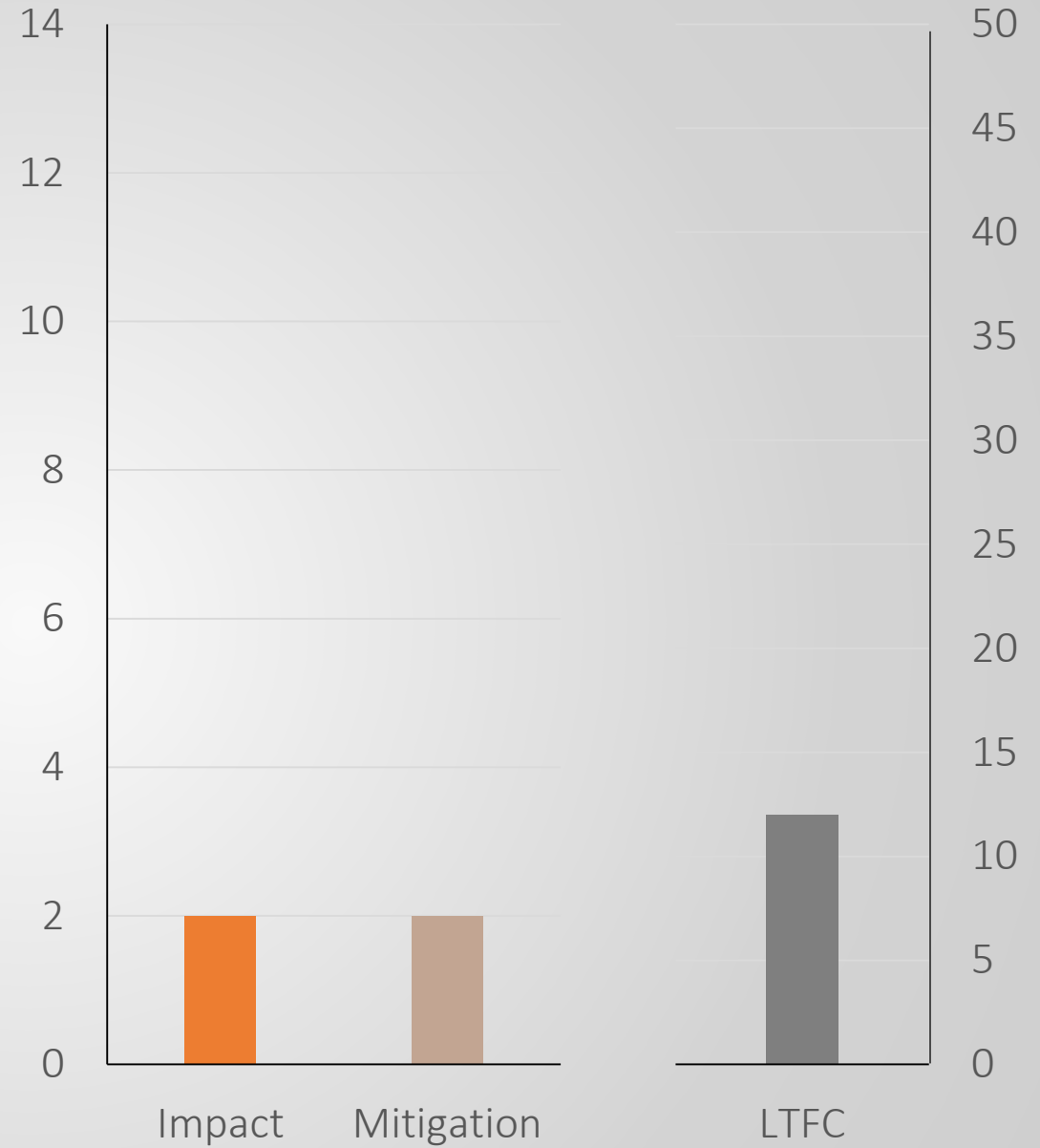
Large impact, large and equal mitigation.



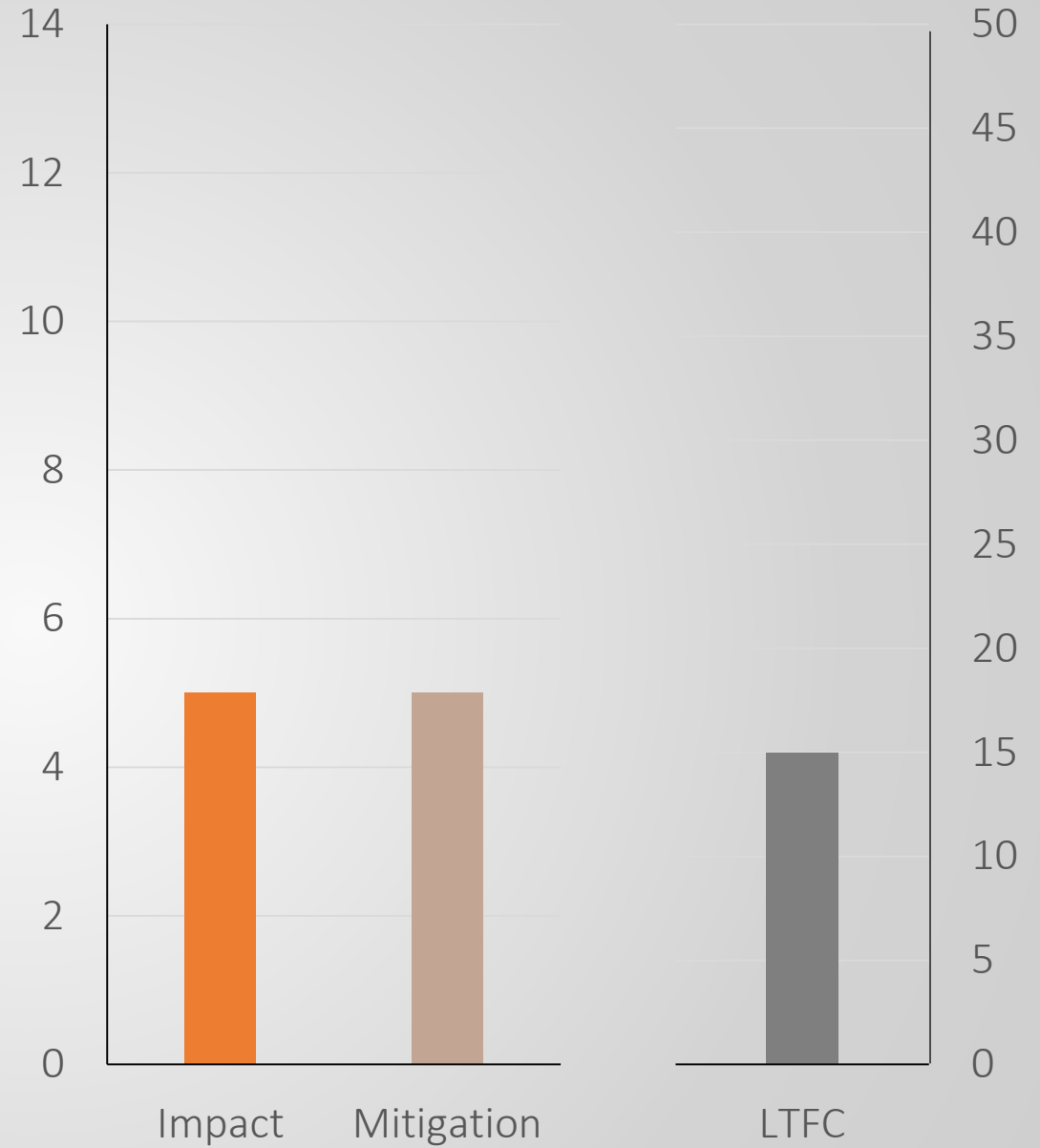
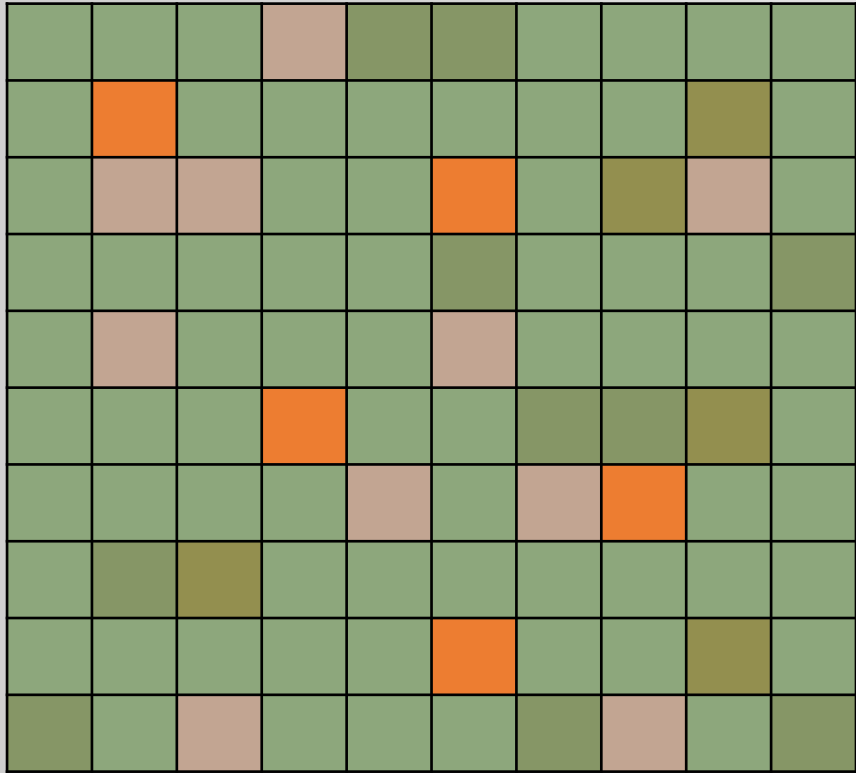
Minimization Approach



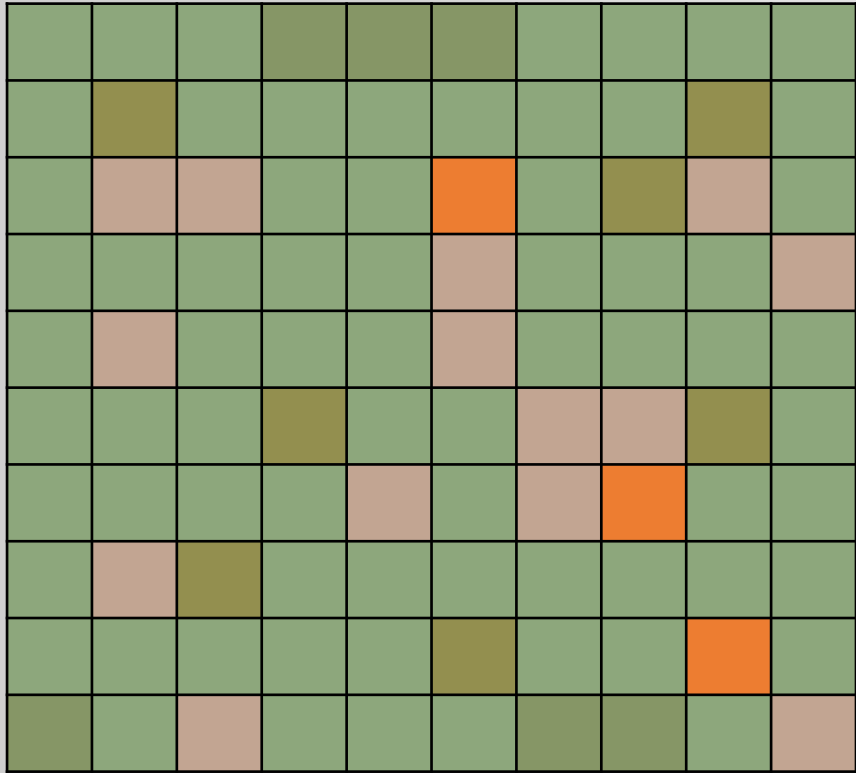
Less impact and less mitigation.
Also, less LTFC.



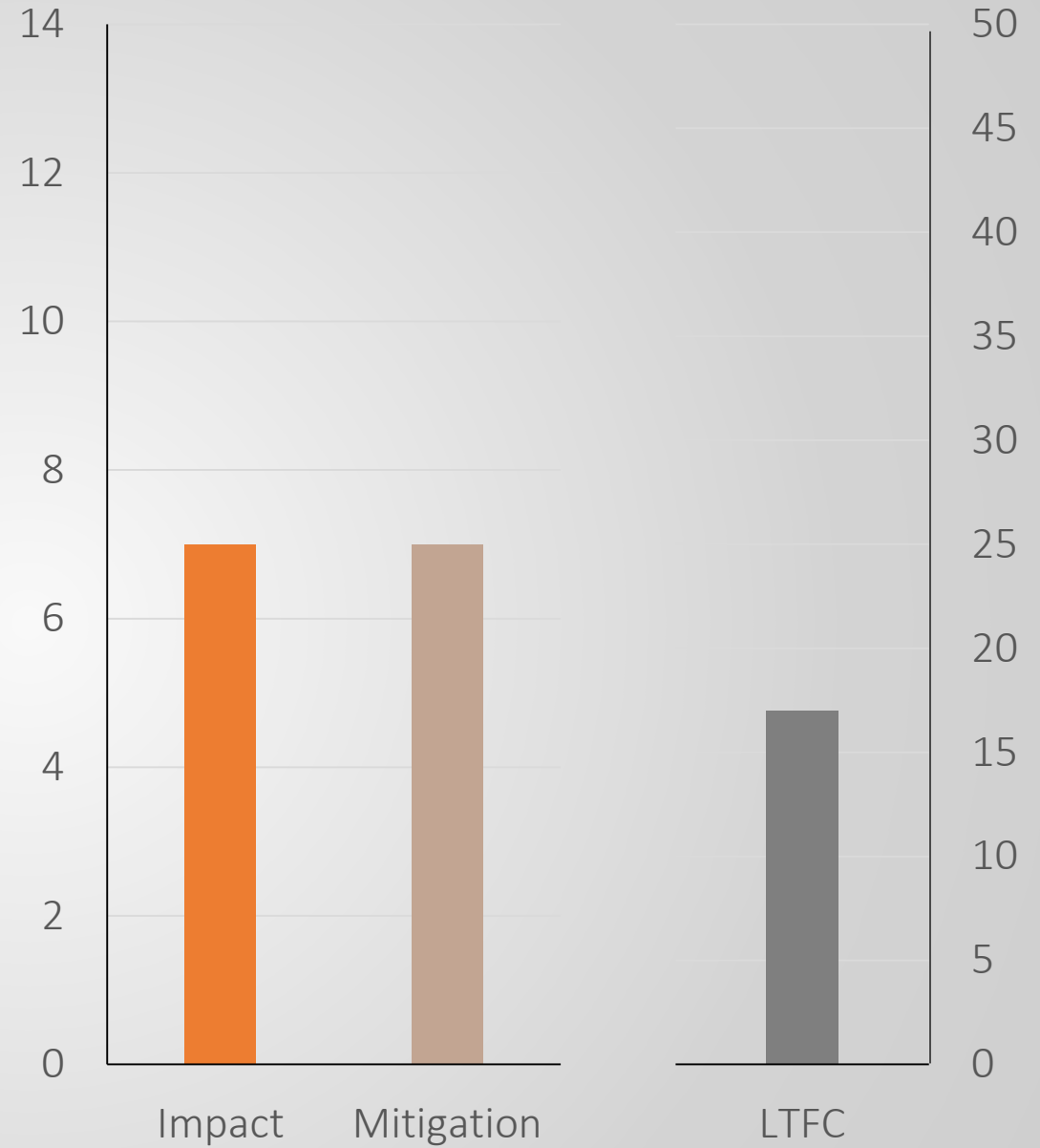
Minimization/Mitigation Combination



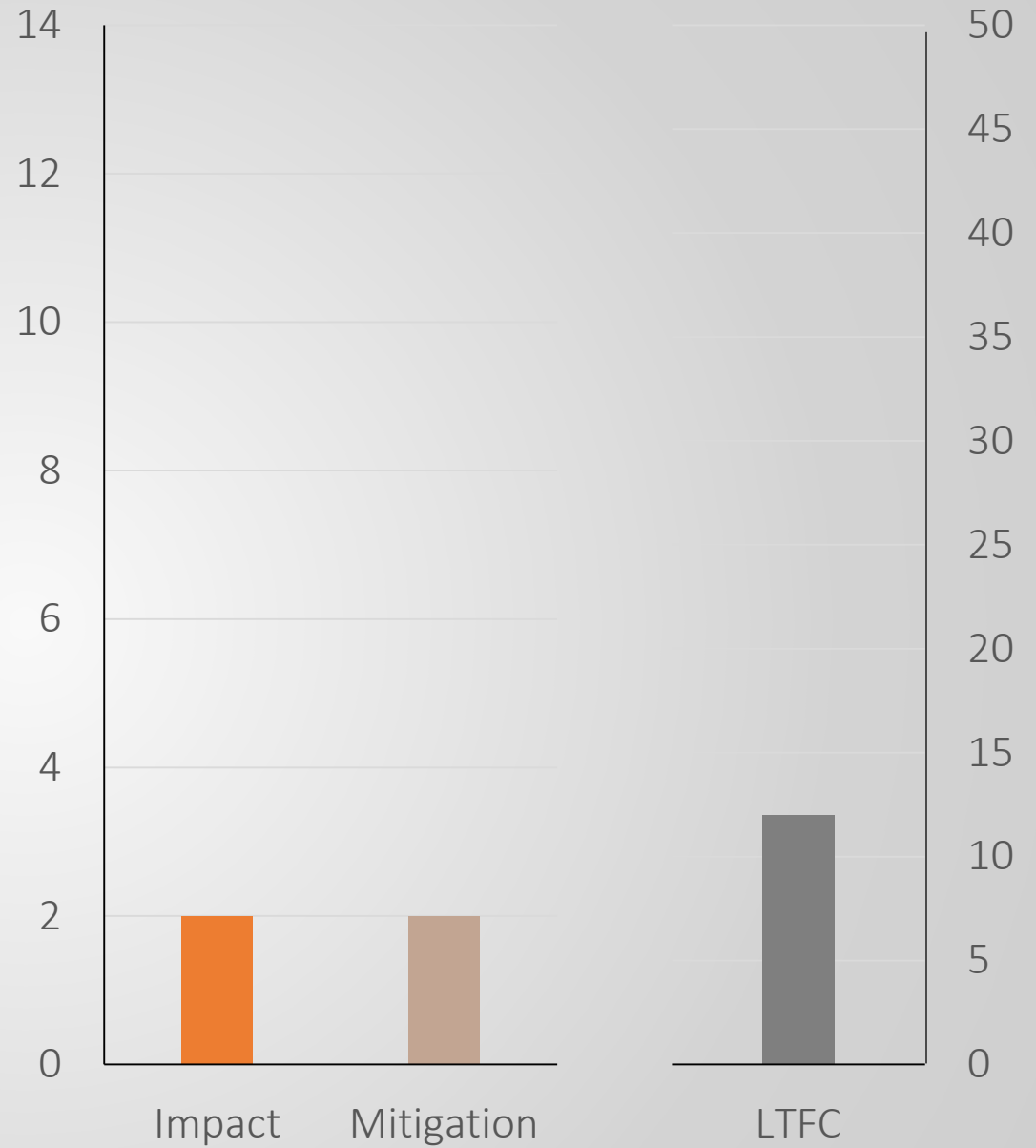
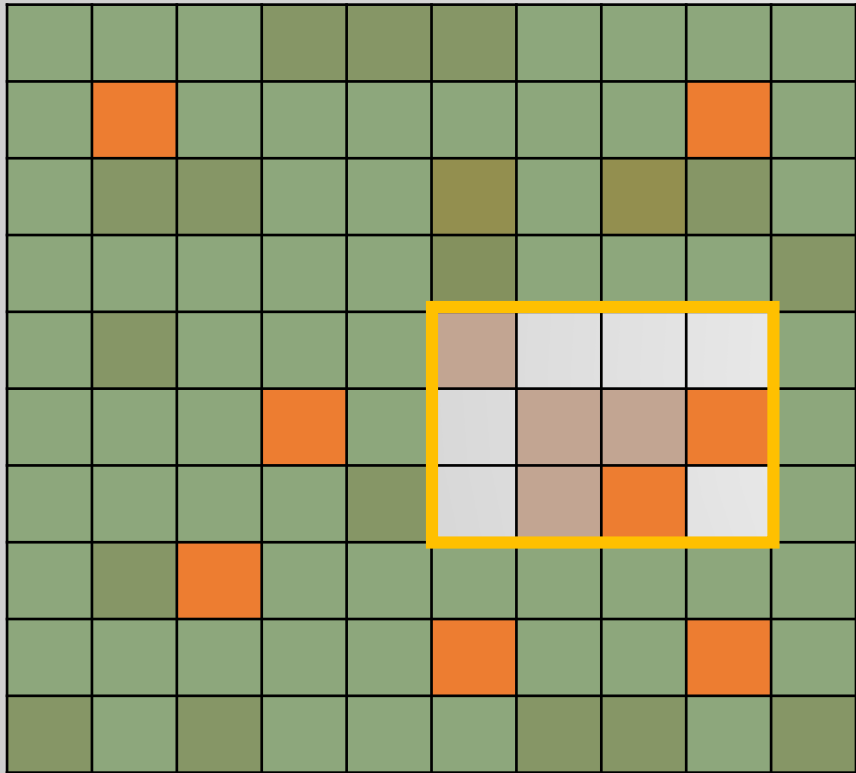
Minimization/Mitigation Combination



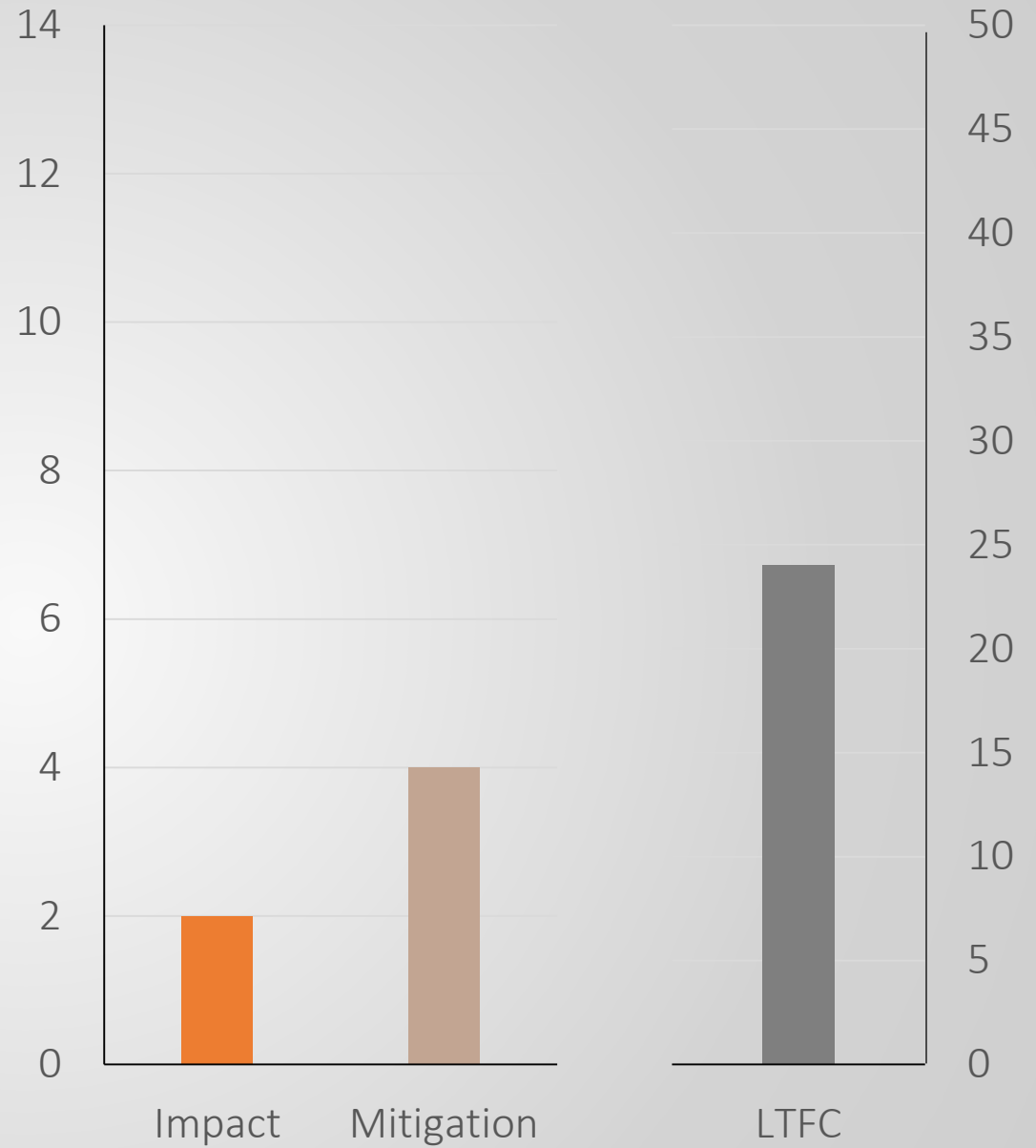
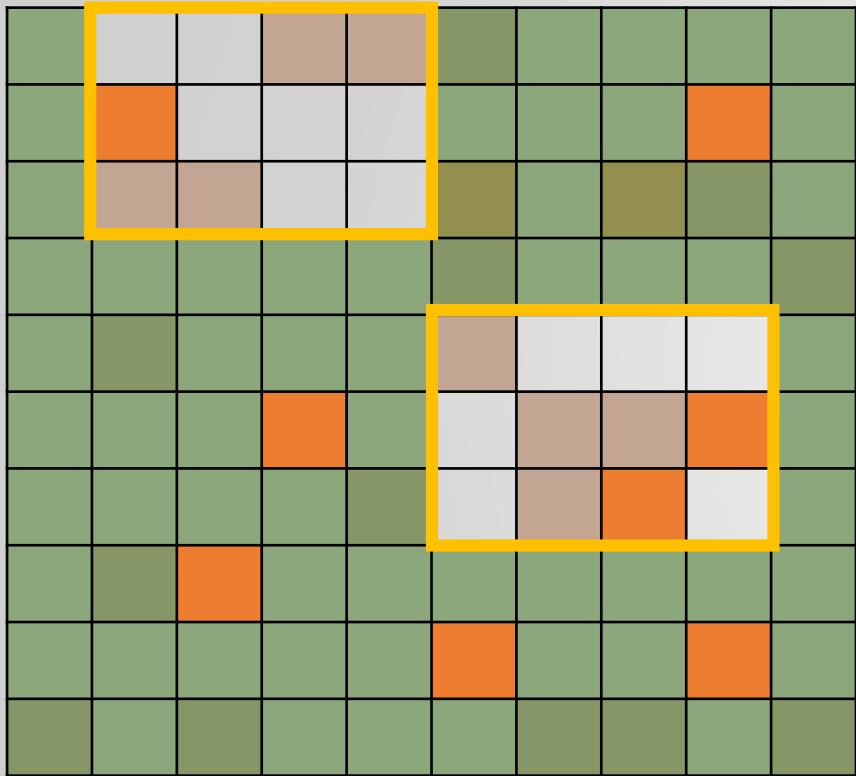
Another combination with less minimization.

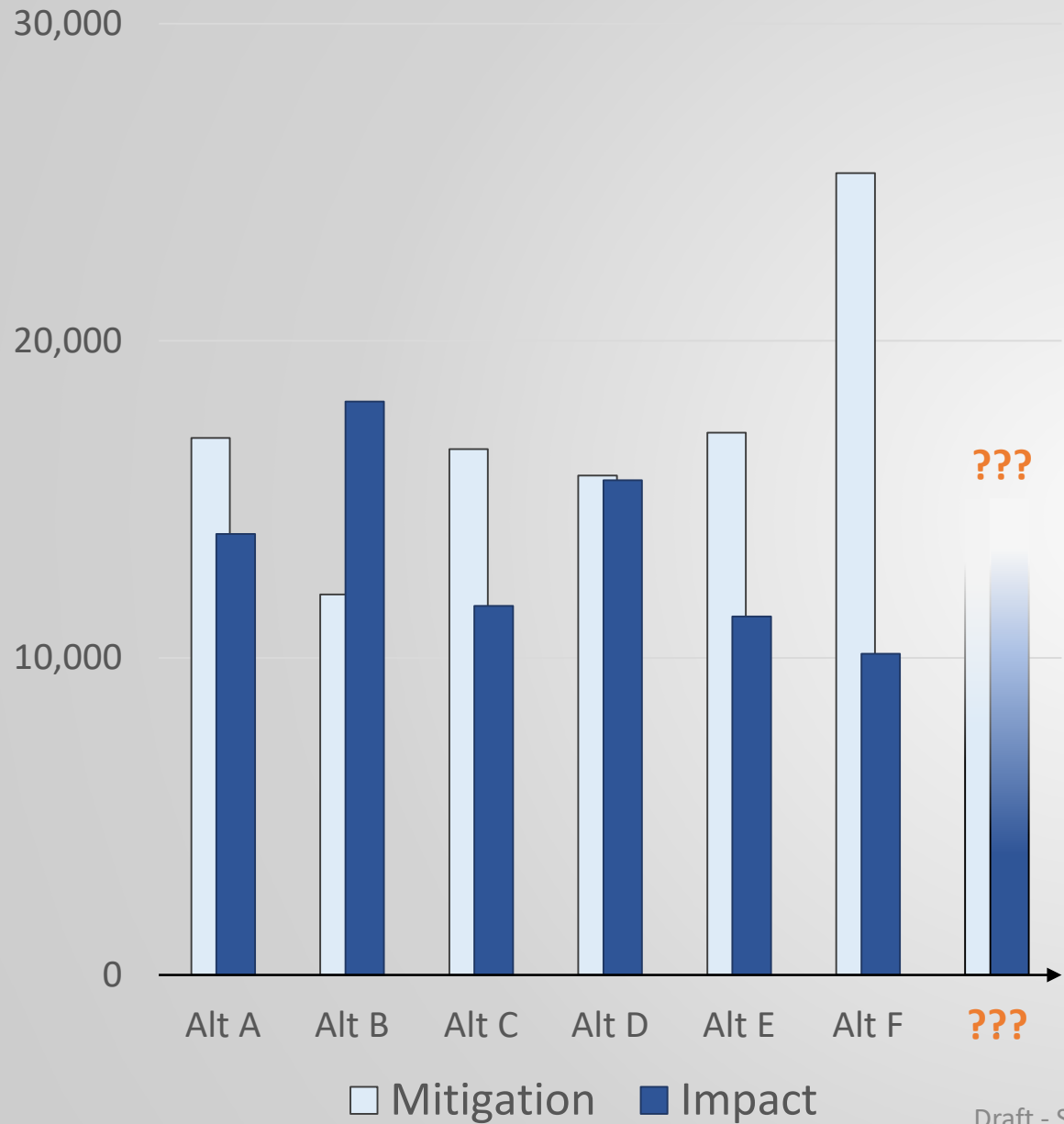


Special Habitat Area



Special Habitat Area





Real Alternatives



For more **minimization**, we would protect current habitat:

- **Occupied Sites** (P-stage = 1)
- **Buffers** (Removes 'edge' discount, lowers impact)
- **Conservation Areas** (Habitat in strategic locations)
- **High Quality Habitat** (P-stage ≥ 0.47)

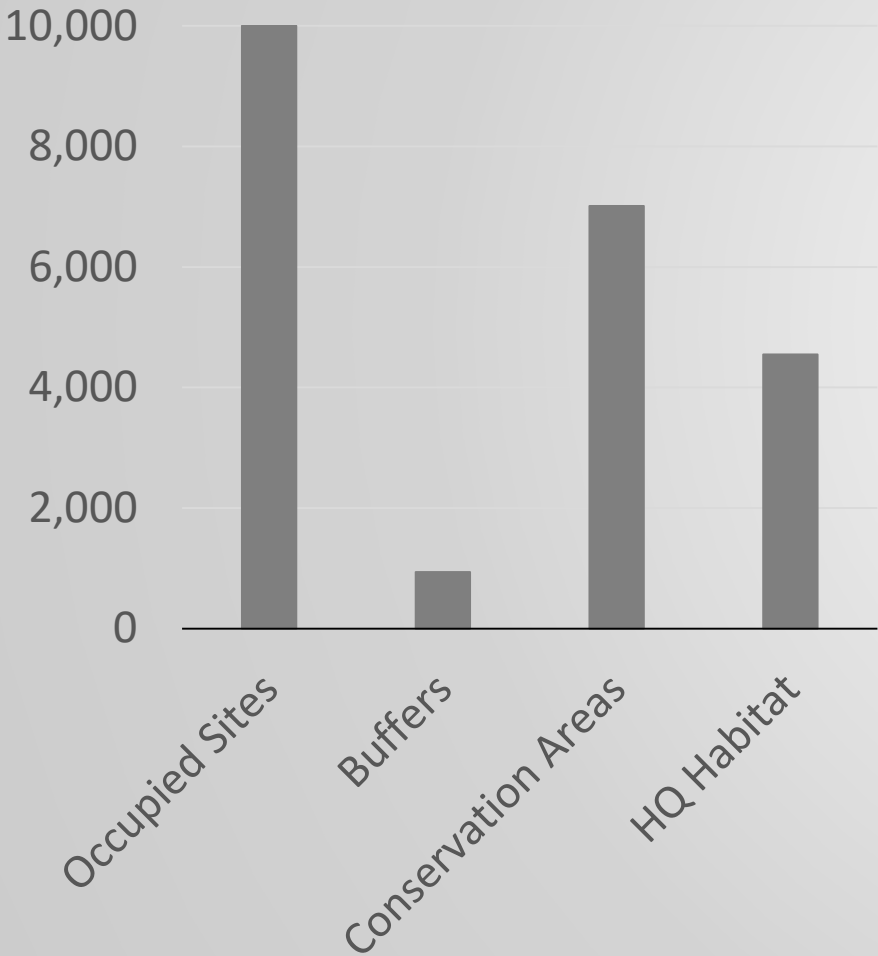


For more **mitigation**, we would grow new or better habitat:

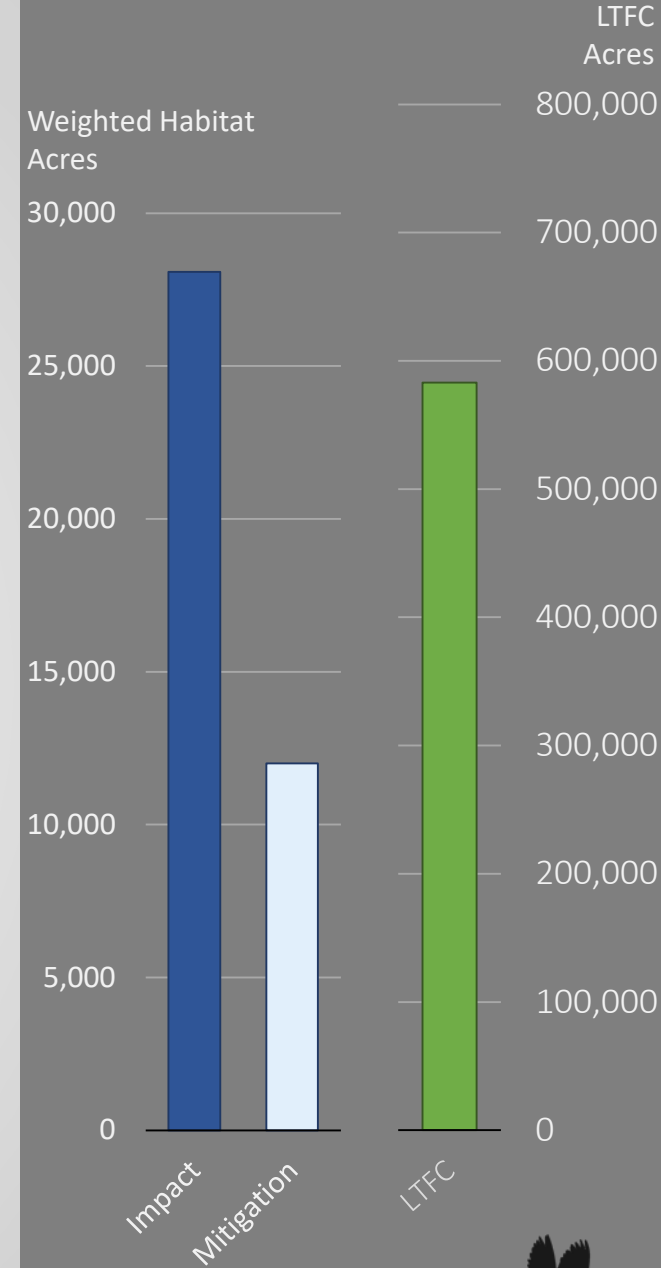
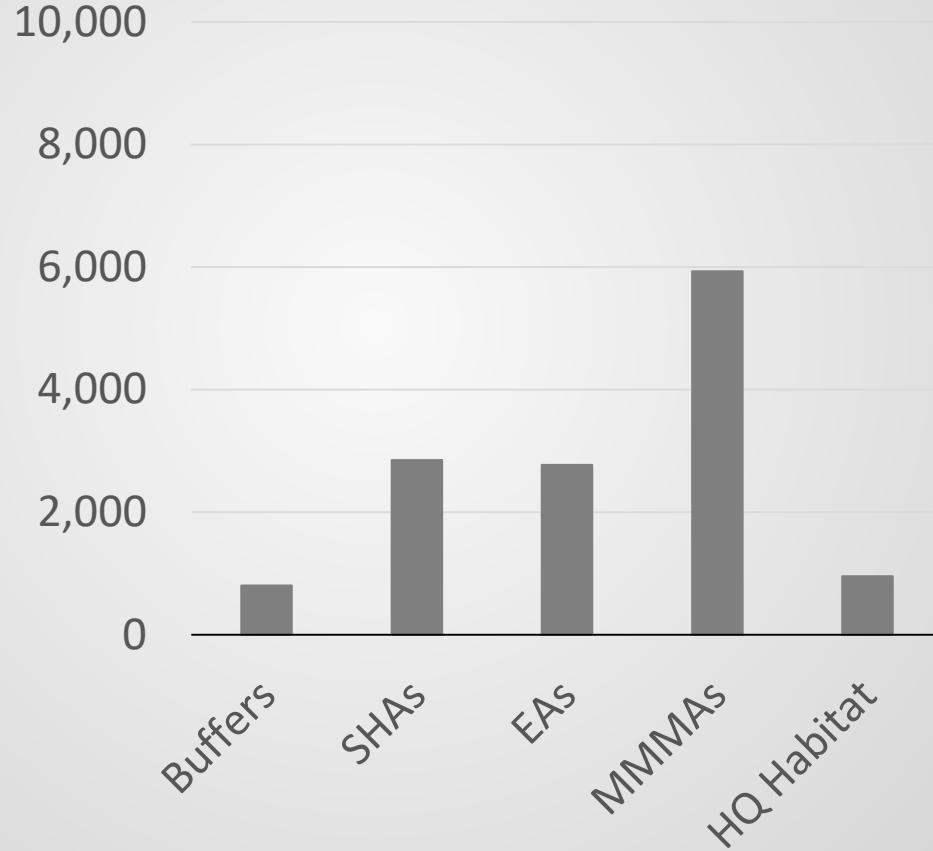
- **Occupied Site Buffers** (Many contain or will grow habitat)
- **High Quality Habitat** (Credit is gained as it grows into better habitat)
- **Conservations Areas** (Special Habitat Areas, Emphasis Areas, Marbled Murrelet Management Areas - Each contain some high quality and/or low quality habitat)



Minimization



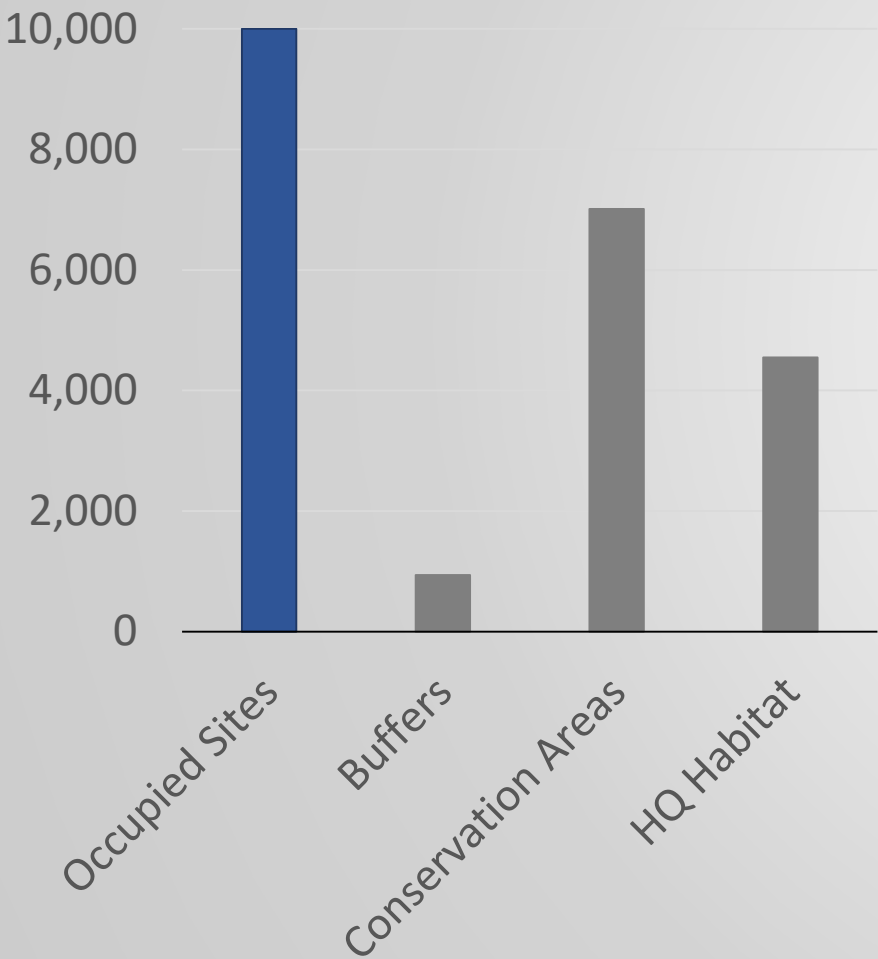
Mitigation



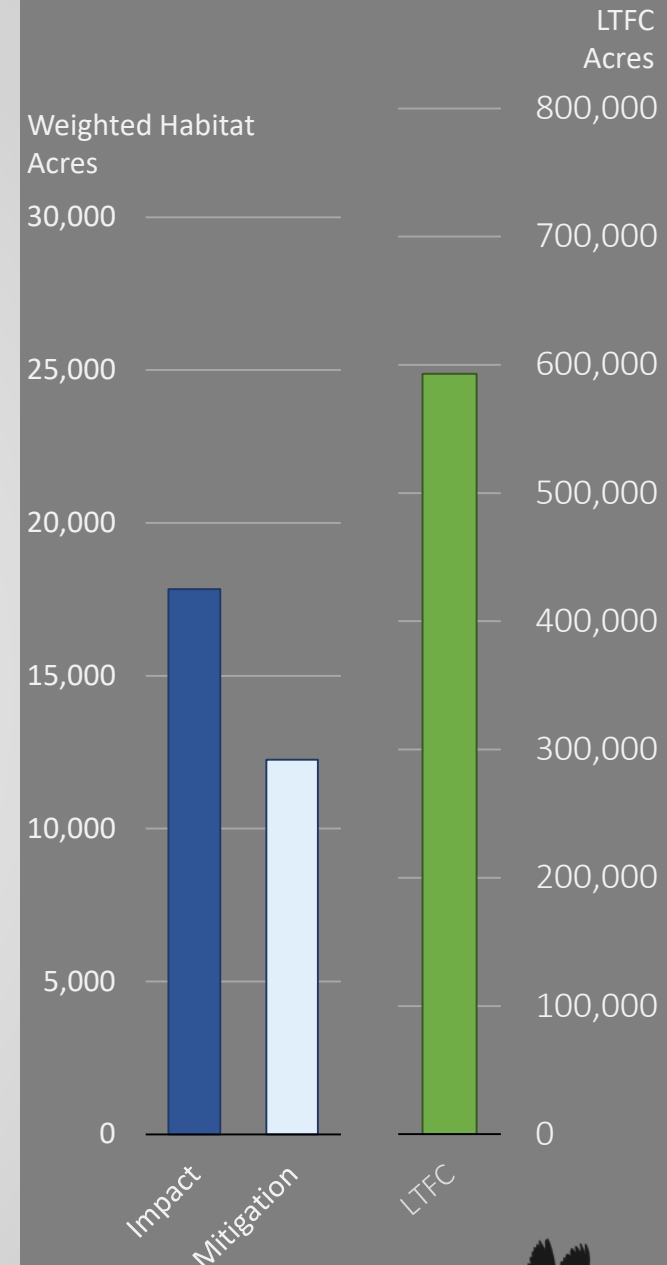
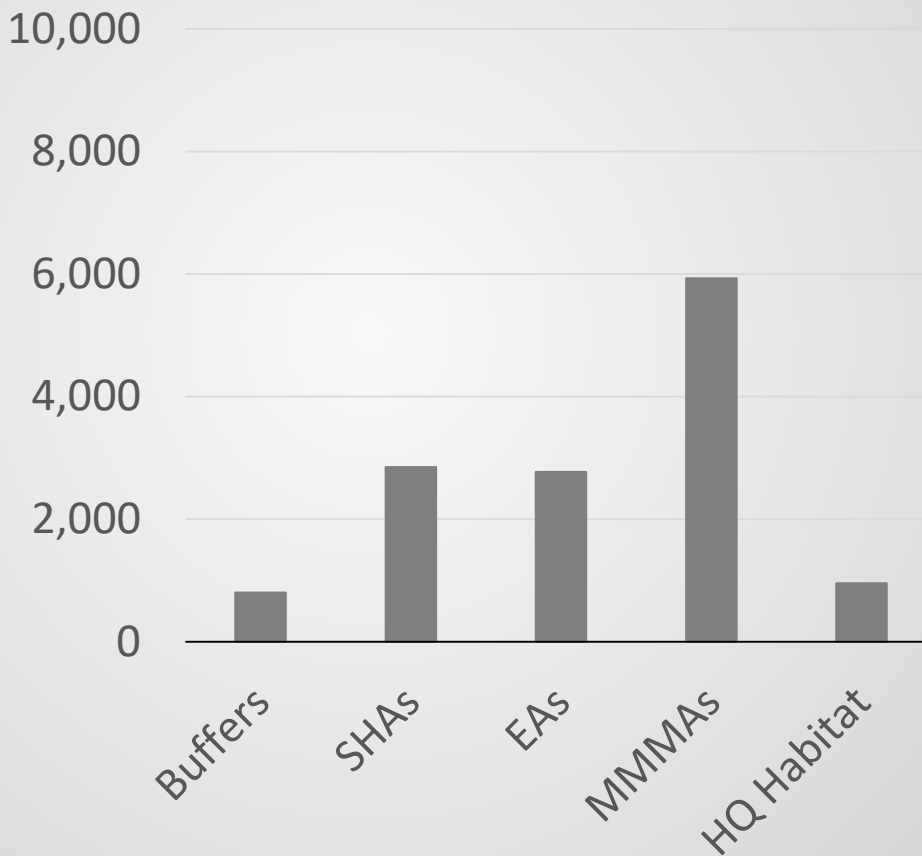
Alt B



Minimization



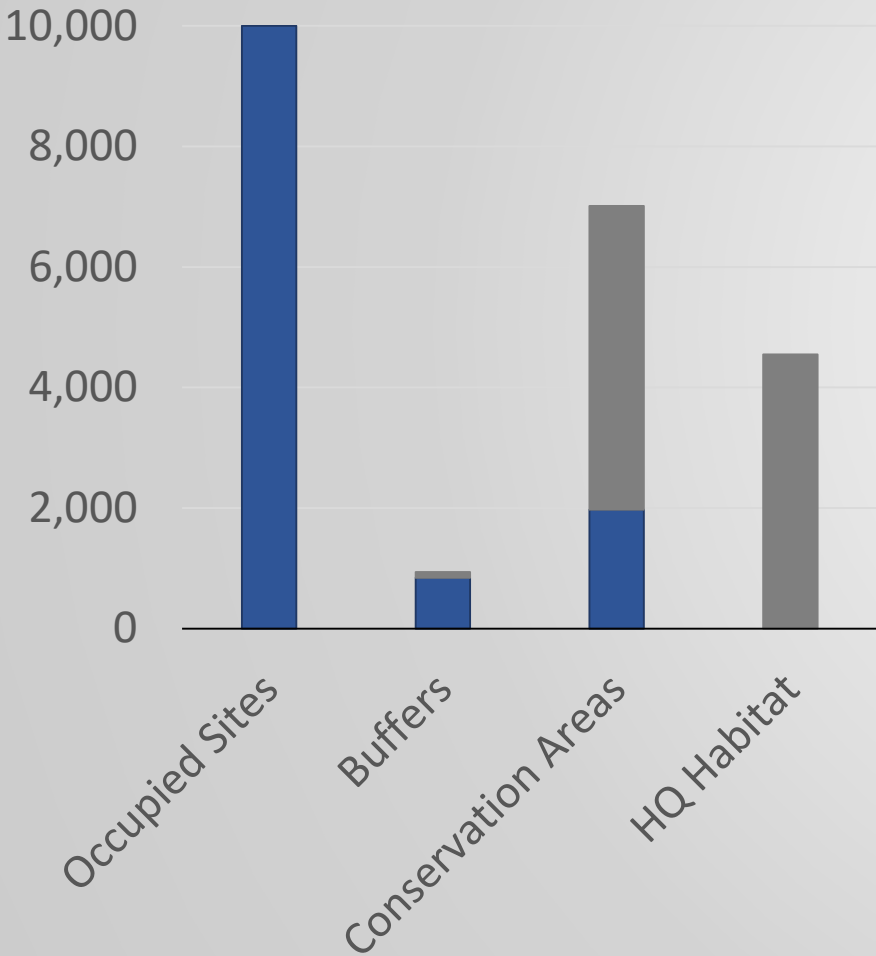
Mitigation



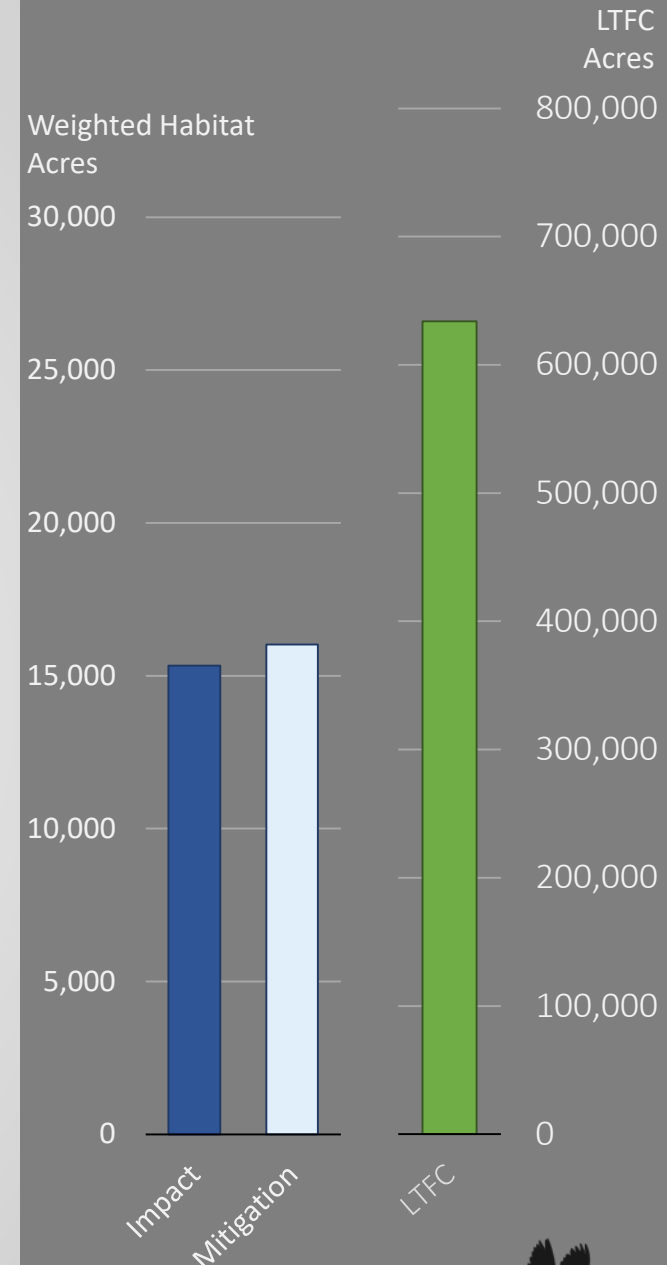
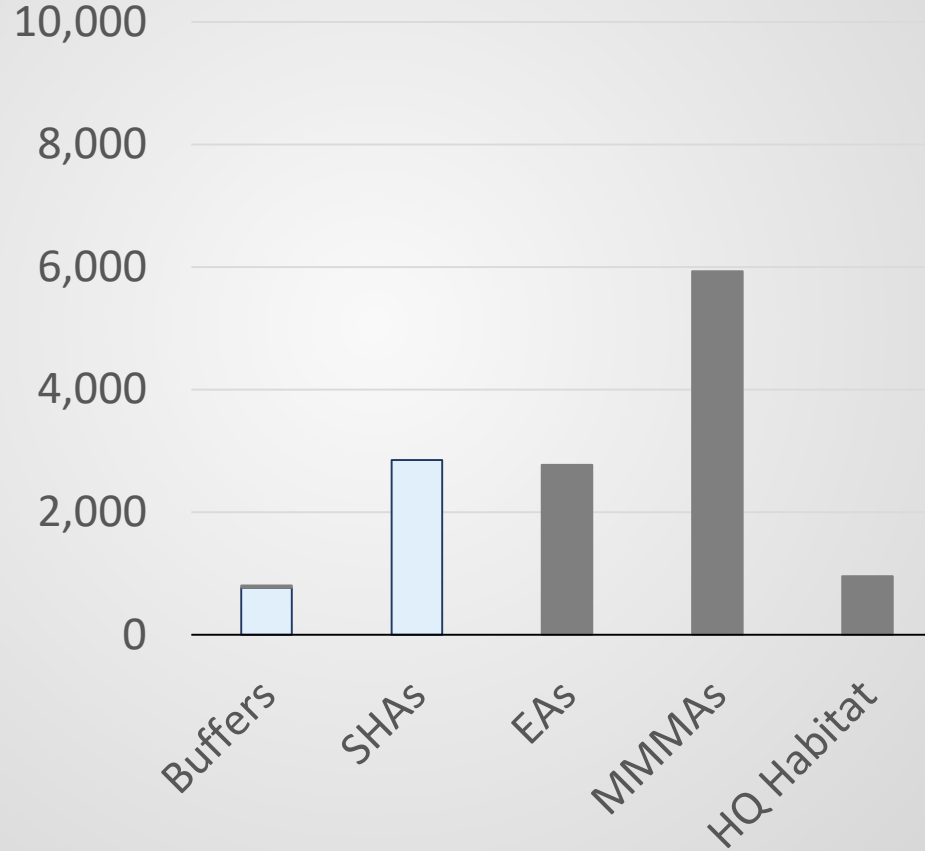
Alt D

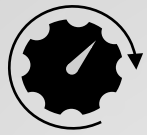


Minimization

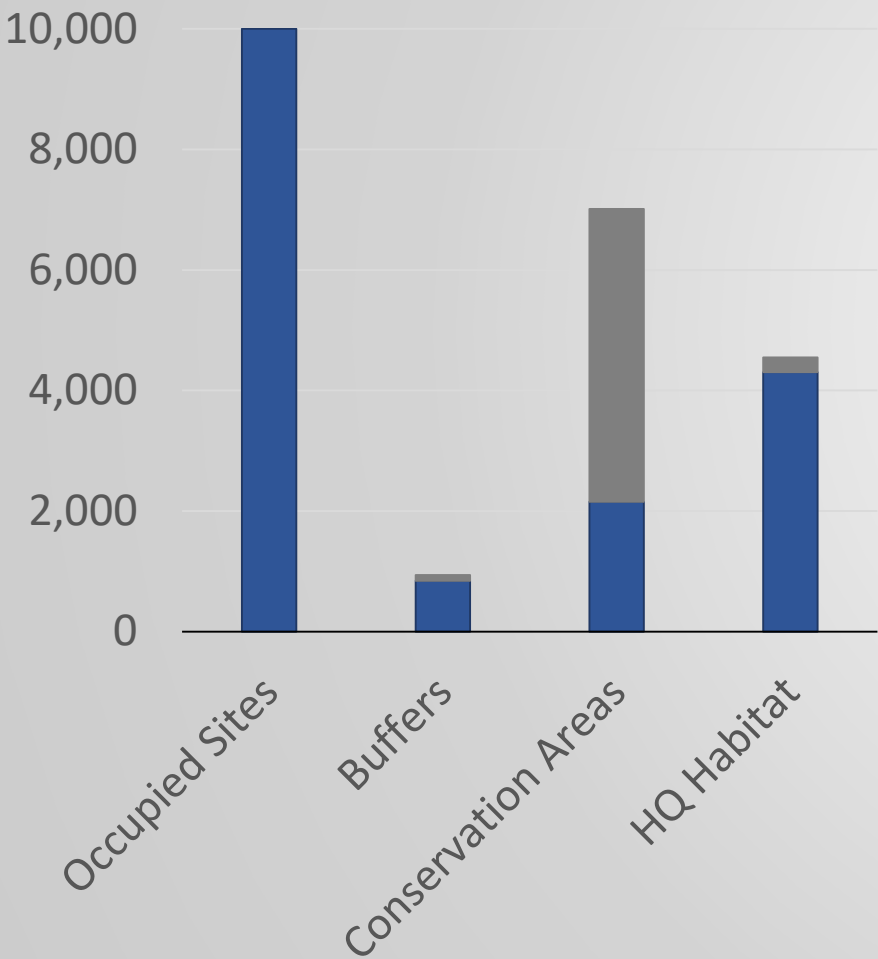


Mitigation

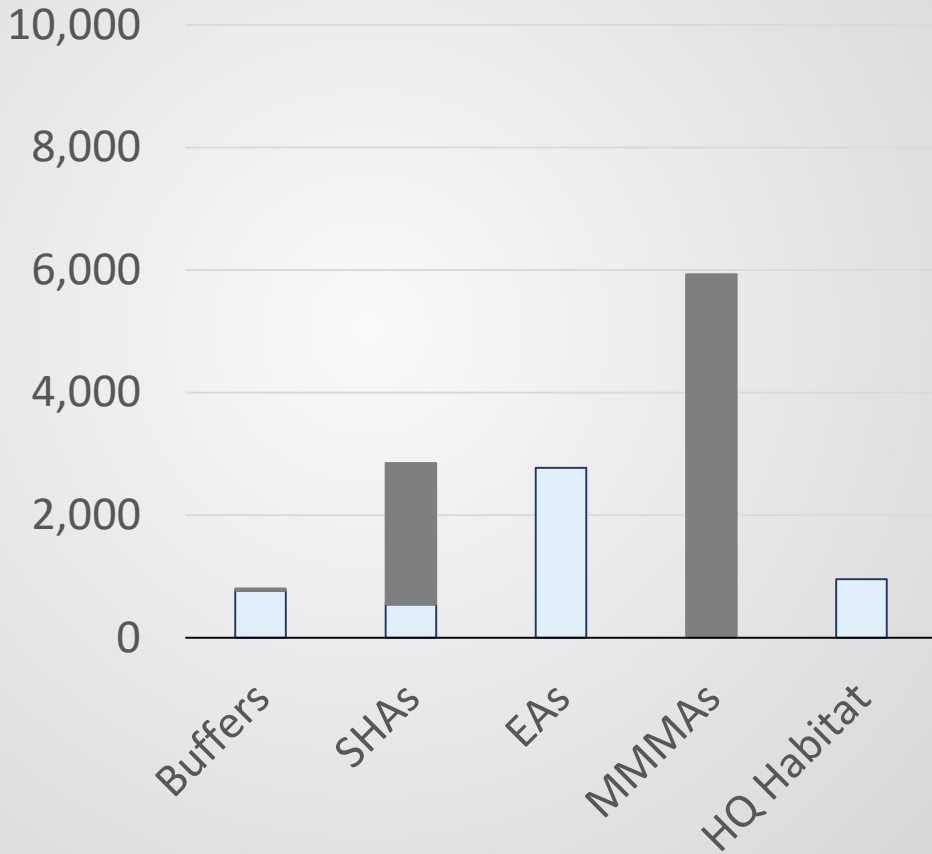




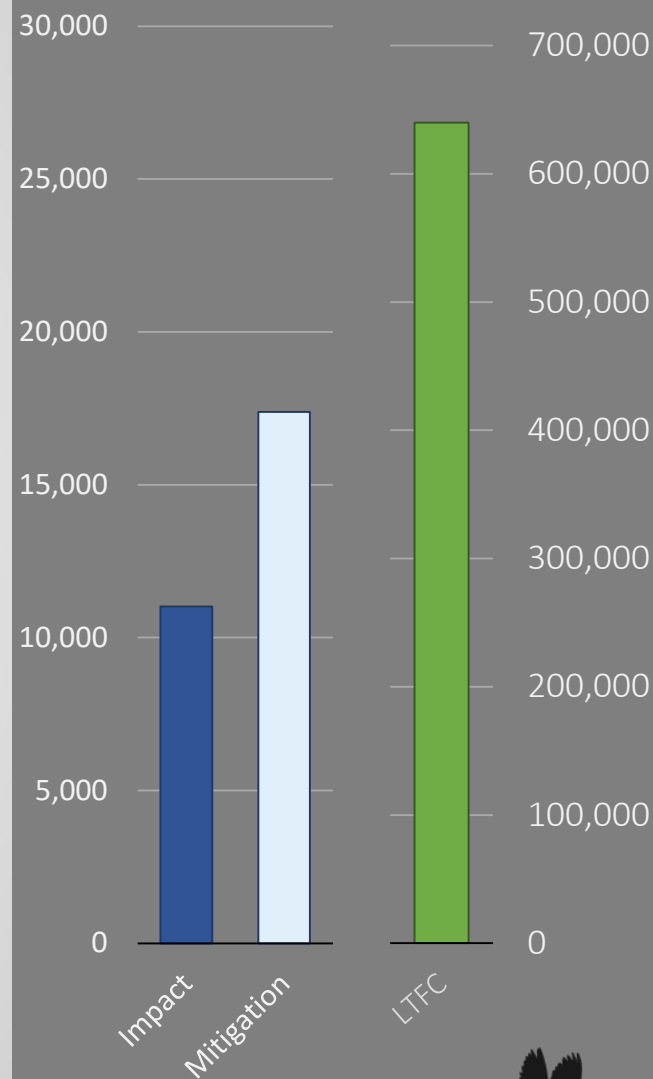
Minimization



Mitigation

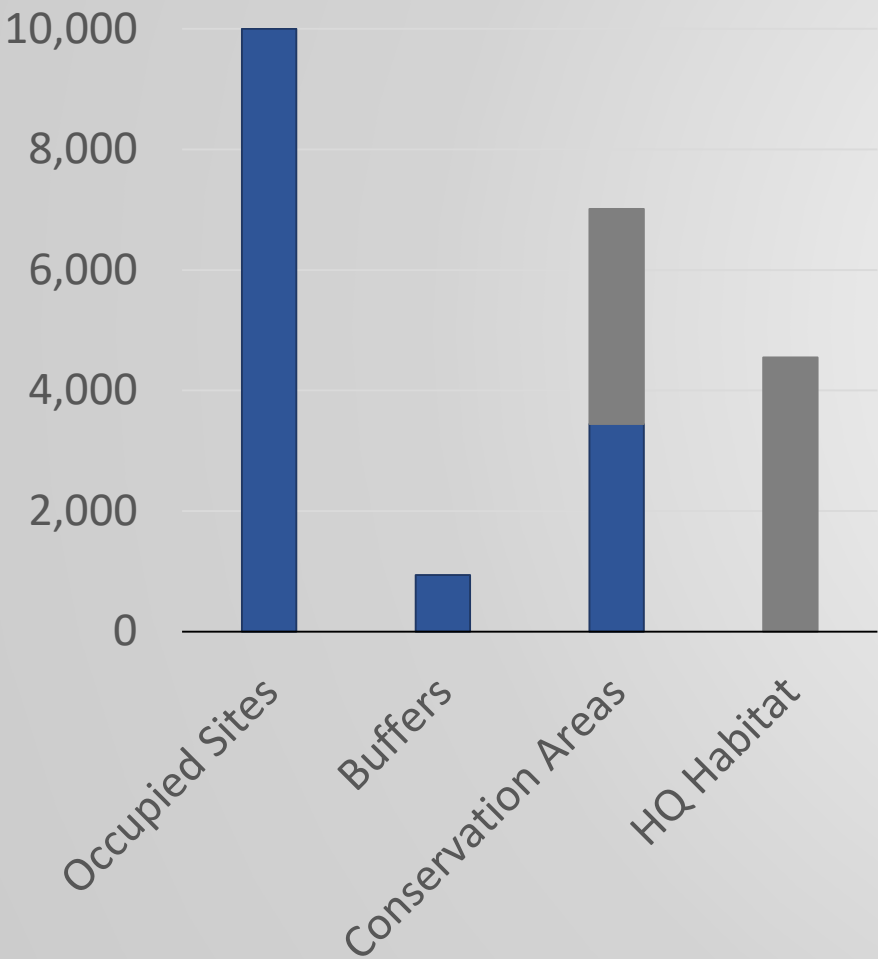


Weighted Habitat Acres

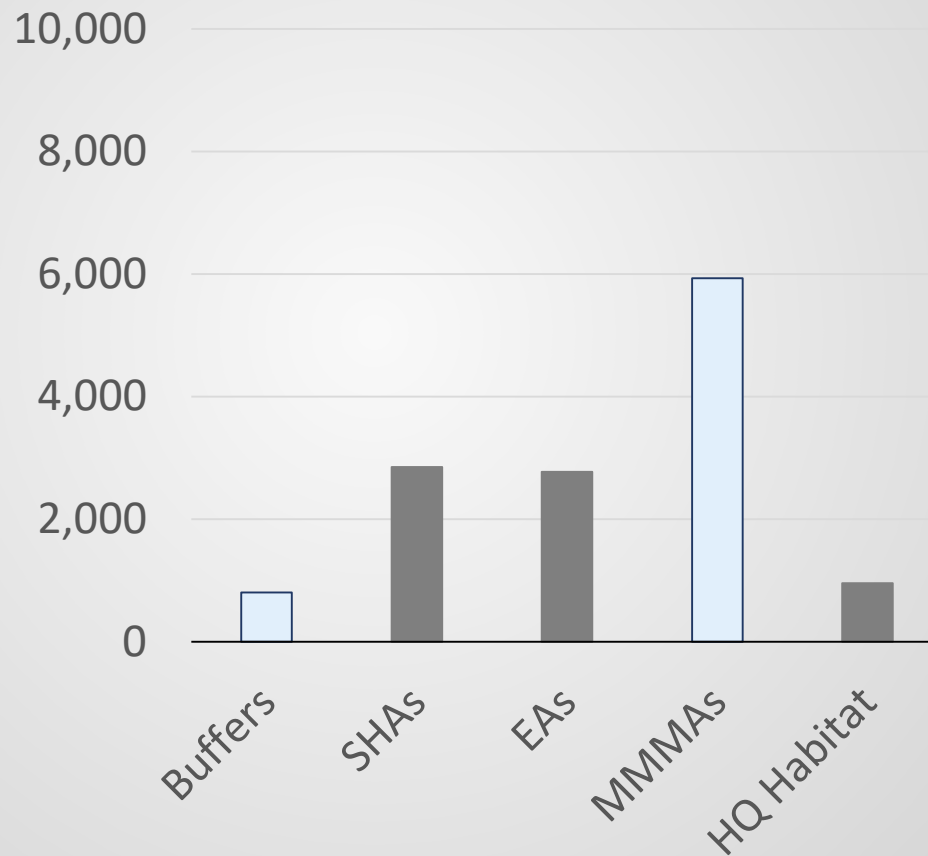




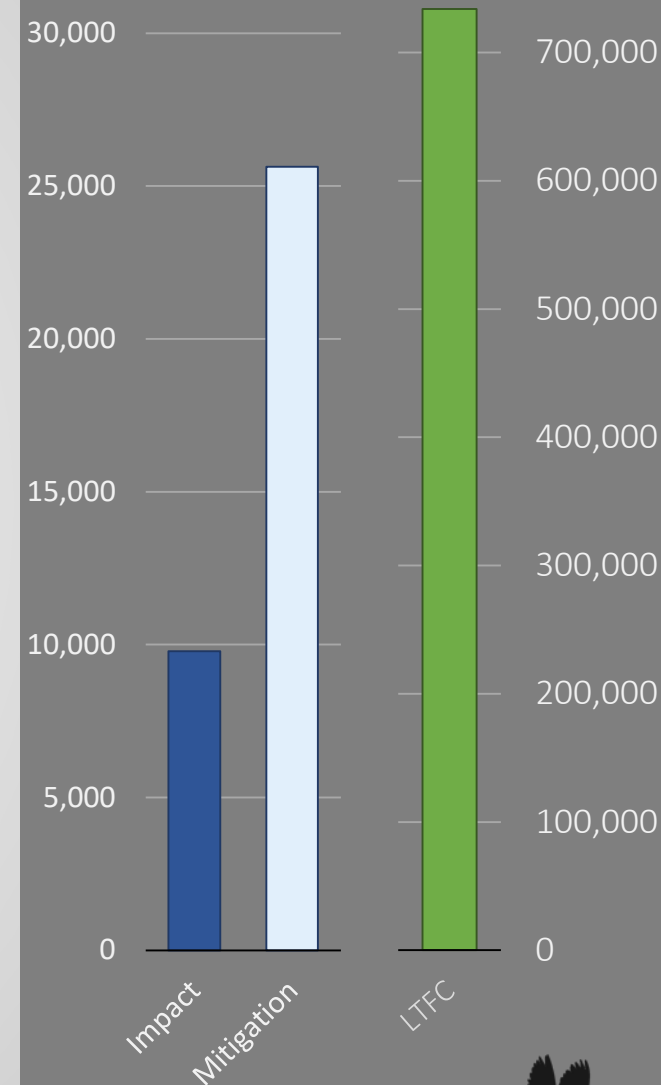
Minimization



Mitigation



Weighted Habitat Acres



Balancing Impact and Mitigation

Public comments and discussion with USFWS identified the following areas to consider.

- Short-term risk to the population
- Strategic locations for conservation
- Natural disturbance





Low Impact

- Reduces short-term risk

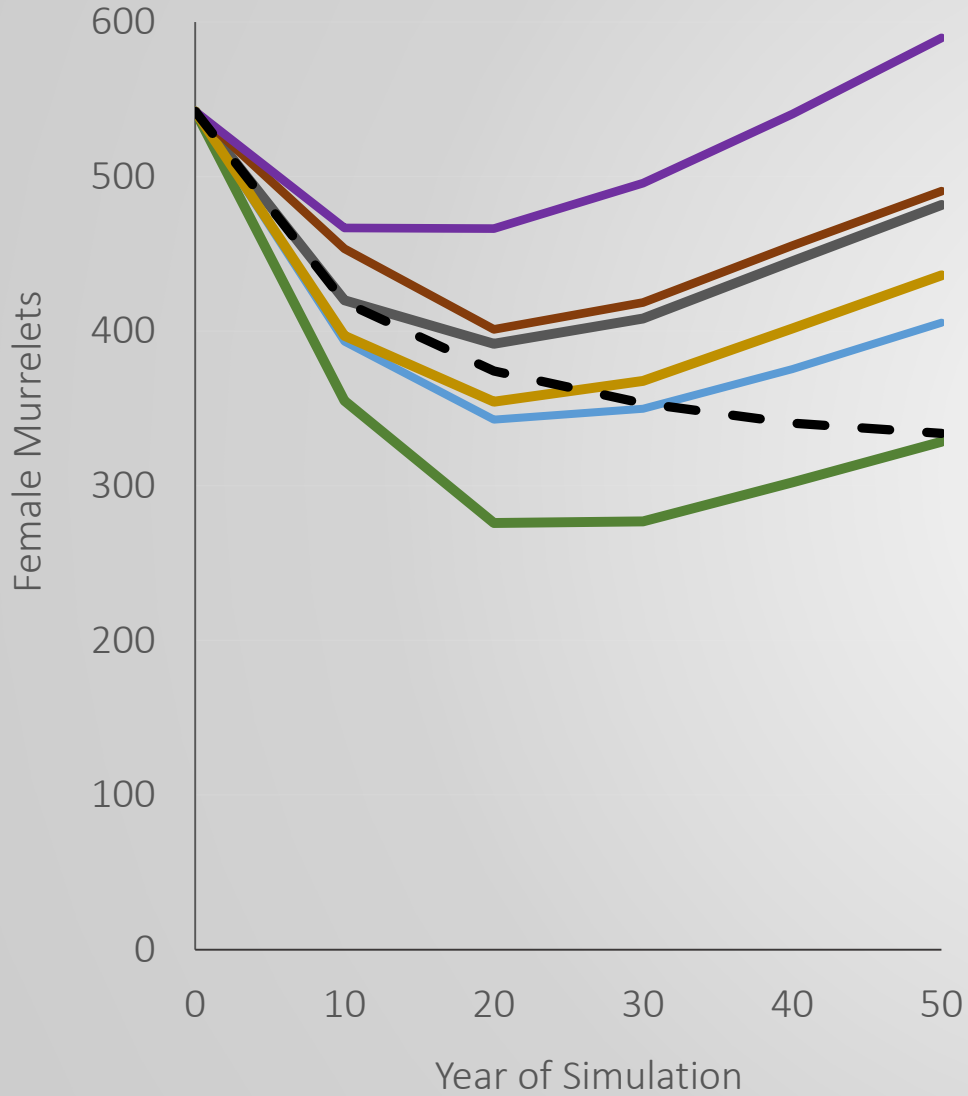


High Mitigation

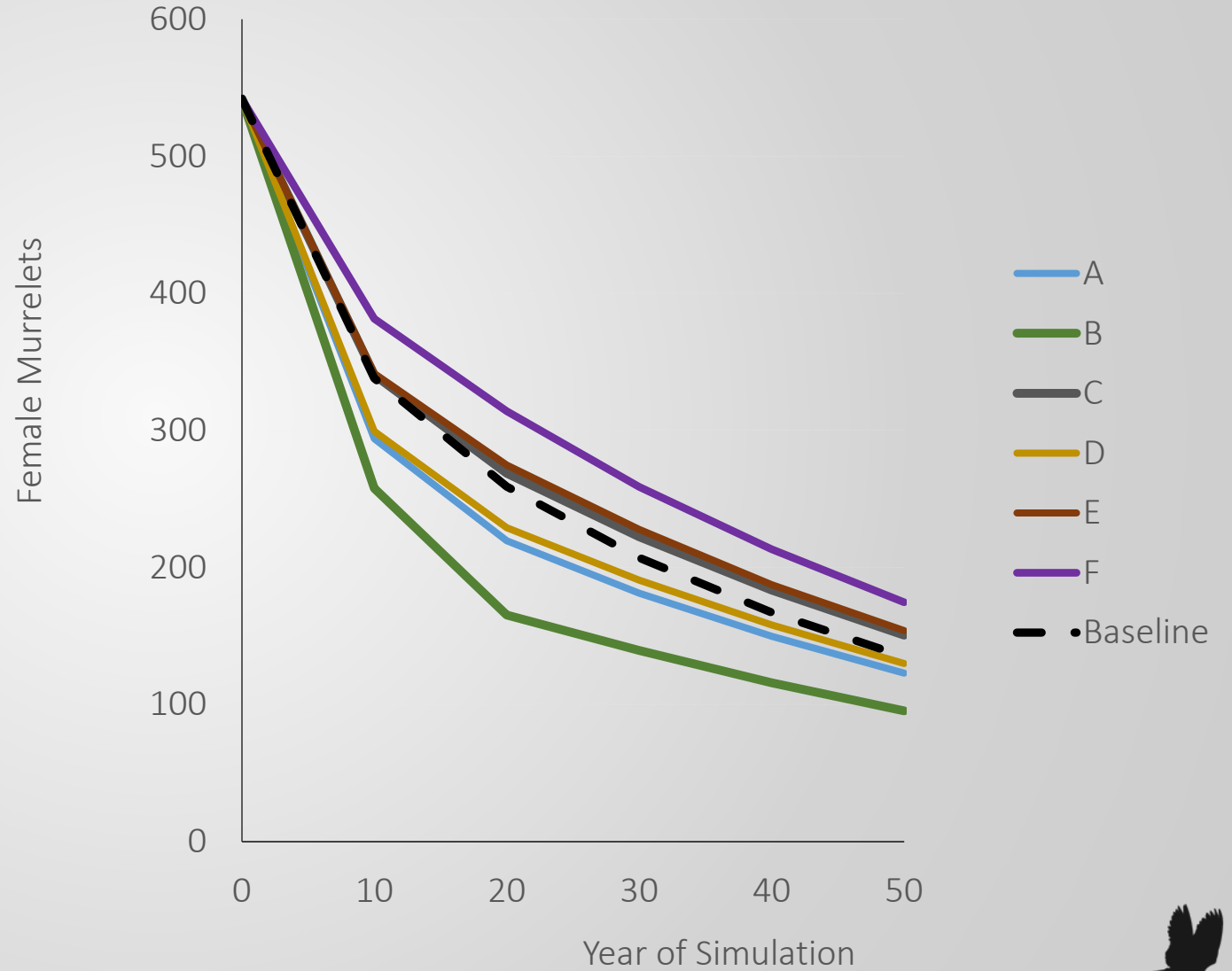
- Increase long-term habitat



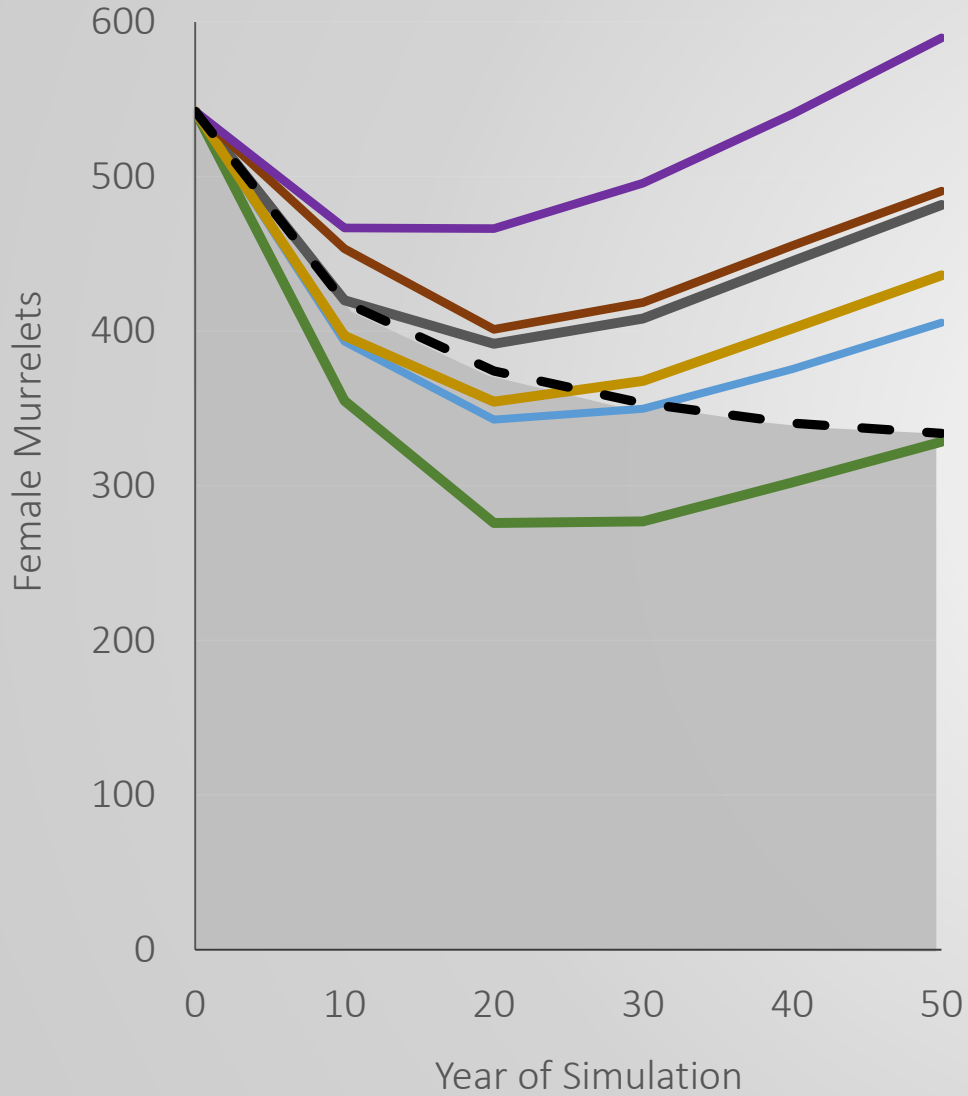
DNR - Enhancement



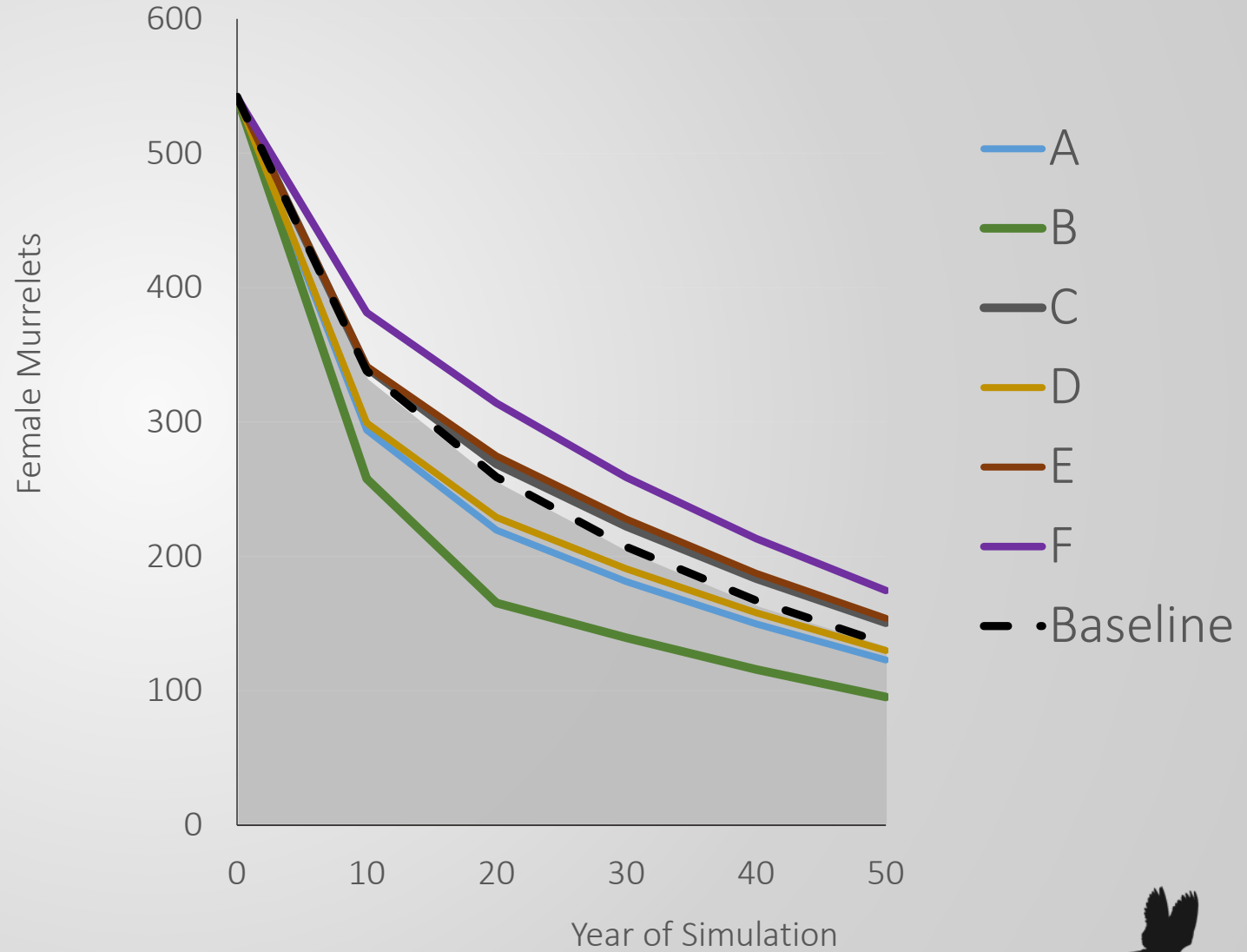
DNR - Risk



DNR - Enhancement



DNR - Risk



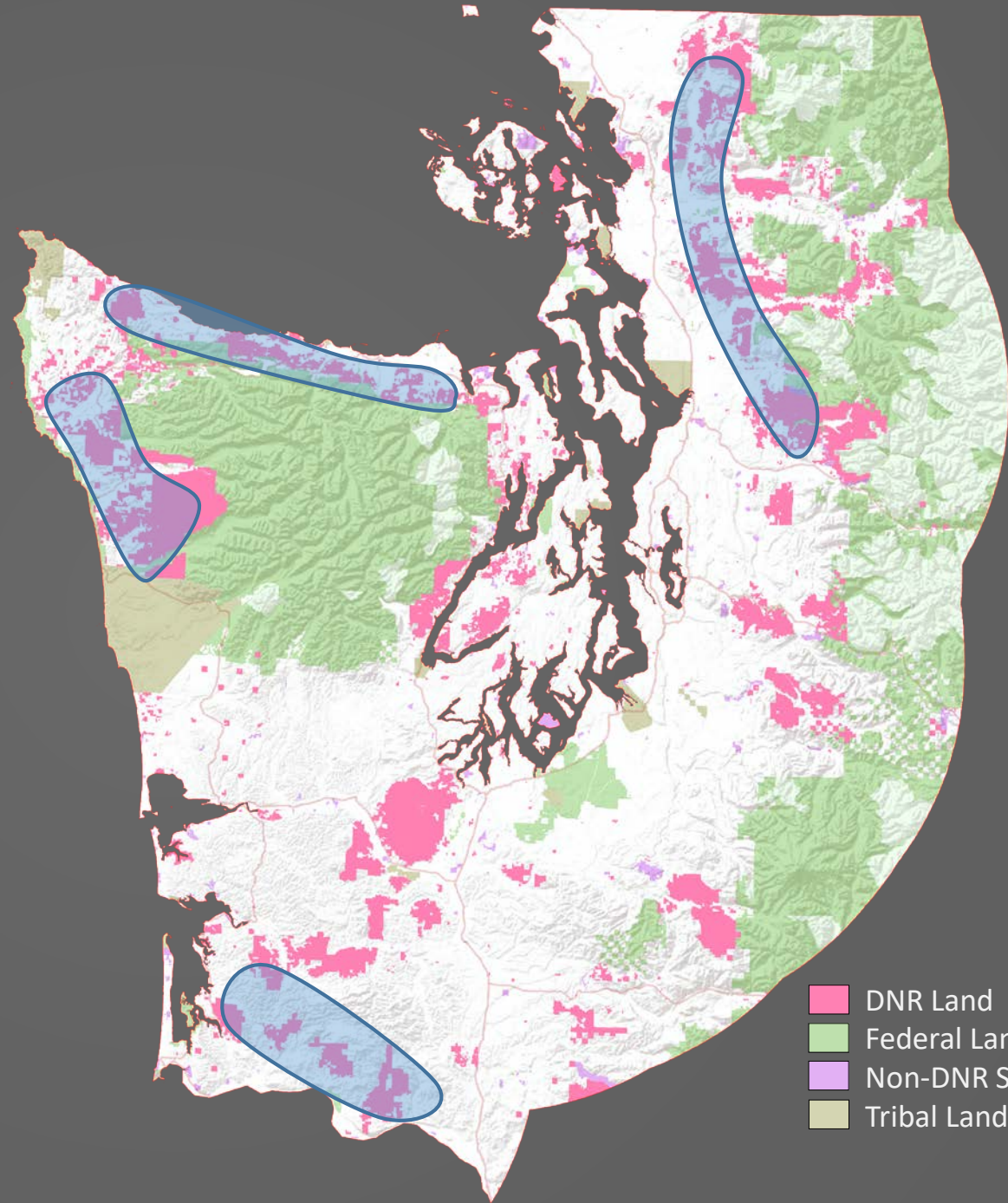
Key Landscapes

North Puget

Straits

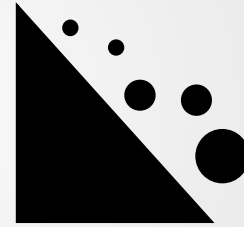
OESF

SW Washington



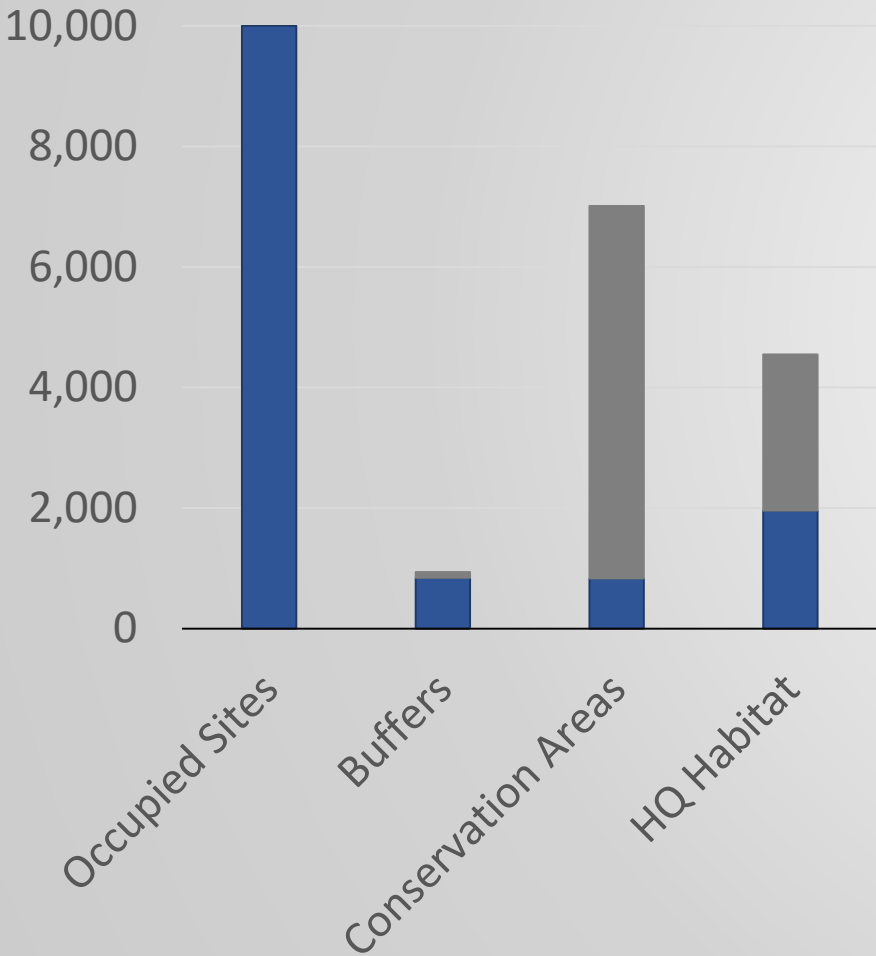
— Natural disturbance

Windthrow
Fire
Disease
Landslides

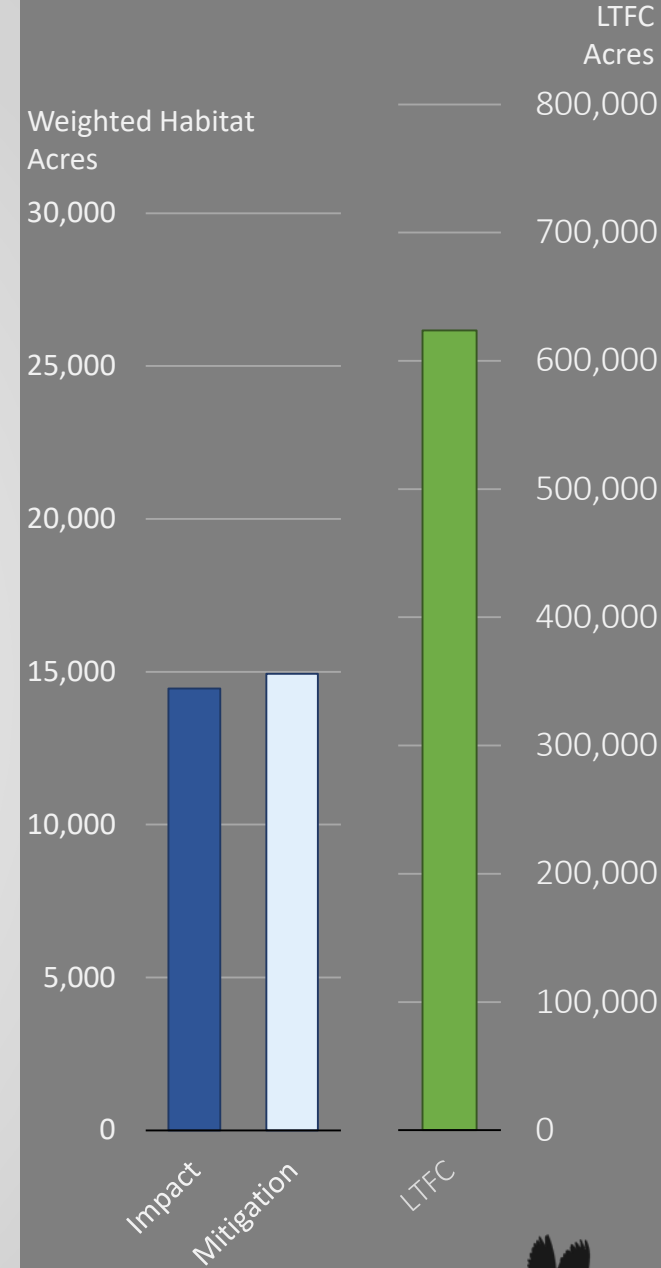
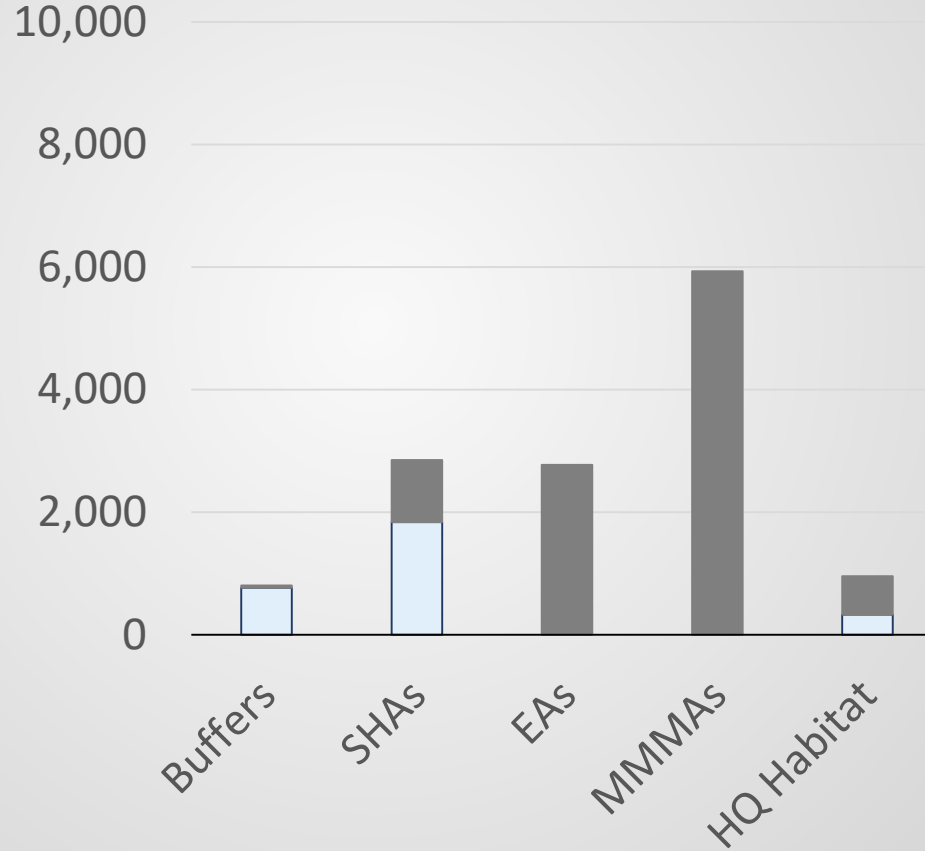


Conceptual 1

Minimization



Mitigation



What are the
key goals for



the preferred
alternative?

Fully offset our impact?

Reduce short-term risk/impact?

Ensure conservation within strategic locations?



Arrearage



Need

- RCW 79.10.320 requires DNR to manage forest crops on a sustained yield basis.
- RCW 79.10.330 requires DNR to consider arrearage at the end of each planning decade if it exists.
- *Policy for Sustainable Forests* states a recalculation on less frequently than every ten years.

Purpose

To recalculate a sustainable harvest level consistent with DNR policies, including the *Policy for Sustainable Forests*, the 1997 HCP, and applicable state and federal laws.

Objectives

1. Coordinate with the marbled murrelet long-term conservation strategy
2. Incorporate new information into an updated model
3. Consider climate change
4. Ensure alternatives analyzed are reasonable, feasible, and consistent with DNR's trust management obligations, existing DNR policies, and applicable laws.

- SHC DEIS



RCW 79.10.330

If an arrearage exists... the department shall conduct an analysis... to determine the course of action.... which provides the greatest return to the trusts based upon economic conditions... as well as impacts on the environment.



RCW 79.10.300

Arrearage is the difference
between planned volume and volume sold.



1 702 mmbf
/ 5 years

2 462 mmbf
/ 10 years

3 462 mmbf
/ 1 year

4 Included in
inventory



1 702 mmbf
/ 5 years

- Up to 320 MMBF/decade more than including arrearage into inventory.

2 462 mmbf
/ 10 years

- Up to 258 MMBF/decade more than including arrearage into inventory.

3 462 mmbf
/ 1 year

- Up to 258 MMBF/decade more than including arrearage into inventory.

4 Included in
inventory

- Lowest first decade volume.



1 702 mmbf
/ 5 years

- Up to 320 MMBF/decade than including arrearage into inventory.
- Operational/Staffing difficulties.

2 462 mmbf
/ 10 years

- Up to 258 MMBF/decade more than including arrearage into inventory.
- No Operational/Staffing difficulties.

3 462 mmbf
/ 1 year

- Up to 258 MMBF/decade more than including arrearage into inventory.
- Operational/Staffing difficulties.

4 Included in
inventory

- Lowest first decade volume.
- No Operational/Staffing difficulties.



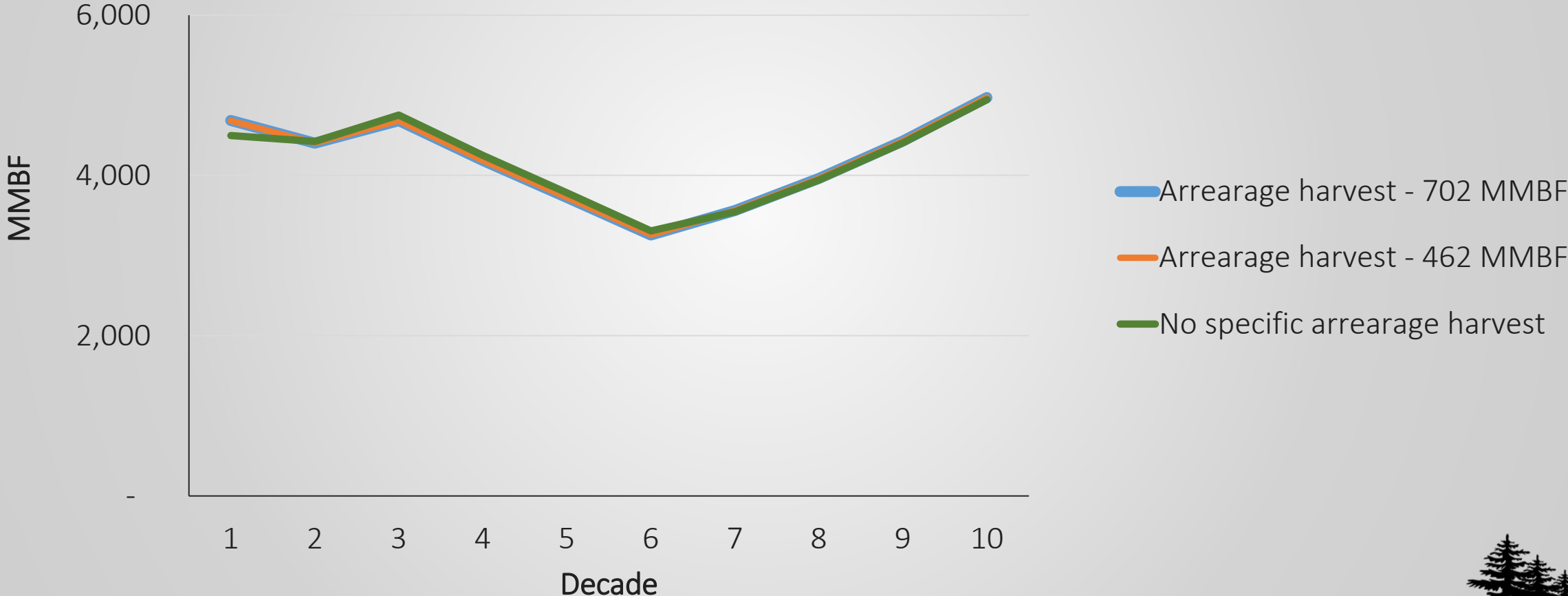
What's the actual return in MMBF per year?

Volume differences between the 702 and 462 arrearage options within murrelet alternatives C – E, for the planning decade, in mmbf/year.

<u>Counties</u>		<u>Counties</u>		<u>SHU's that differ from county list</u>	
Clallam	1.39	0.00	Cowlitz	Federal SHU	5.52
Clark	0.01	0.00	Grays Harbor	OESF SHU	0.03
King	0.04	0.00	Jefferson	Clallam SHU	0.09
Lewis	0.02	0.00	Kitsap	Capitol SHU	0.00
Pacific	0.04	0.00	Mason		
Skagit	0.01	0.00	Pierce		
Skamania	0.05	0.00	Wahkiakum		
Snohomish	0.05	0.00	Whatcom		
Thurston	0.03				



Arrearage options across 100 years



Riparian



Need

- RCW 79.10.320 requires DNR to manage forest crops on a sustained yield basis.
- RCW 79.10.330 requires DNR to consider arrearage at the end of each planning decade if it exists.
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- SHC DEIS



1

Thin riparian areas up to 1% of the decade's thinned or harvested non-riparian area within the 5 west-side planning unities.

2

Thin riparian areas up to 10% of the total riparian area in the 5 west-side planning units.



1

Thin riparian areas up to 1% of the decade's thinned or harvested non-riparian area within the 5 west-side planning unities.

2

Thin riparian areas up to 10% of the total riparian area in the 5 west-side planning units.

- Maintains riparian thinning level at 2015-2016 level for remainder of the planning decade.

This is about 50% higher than the volume that was thinned in riparian areas in the fiscal year 2005-2014 decade



1

Thin riparian areas up to 1% of the decade's thinned or harvested non-riparian area within the 5 west-side planning unities.

- Maintains riparian thinning level at 2015-2016 level for remainder of the planning decade.

This is about 50% higher than the volume that was thinned in riparian areas in the fiscal year 2005-2014 decade.

2

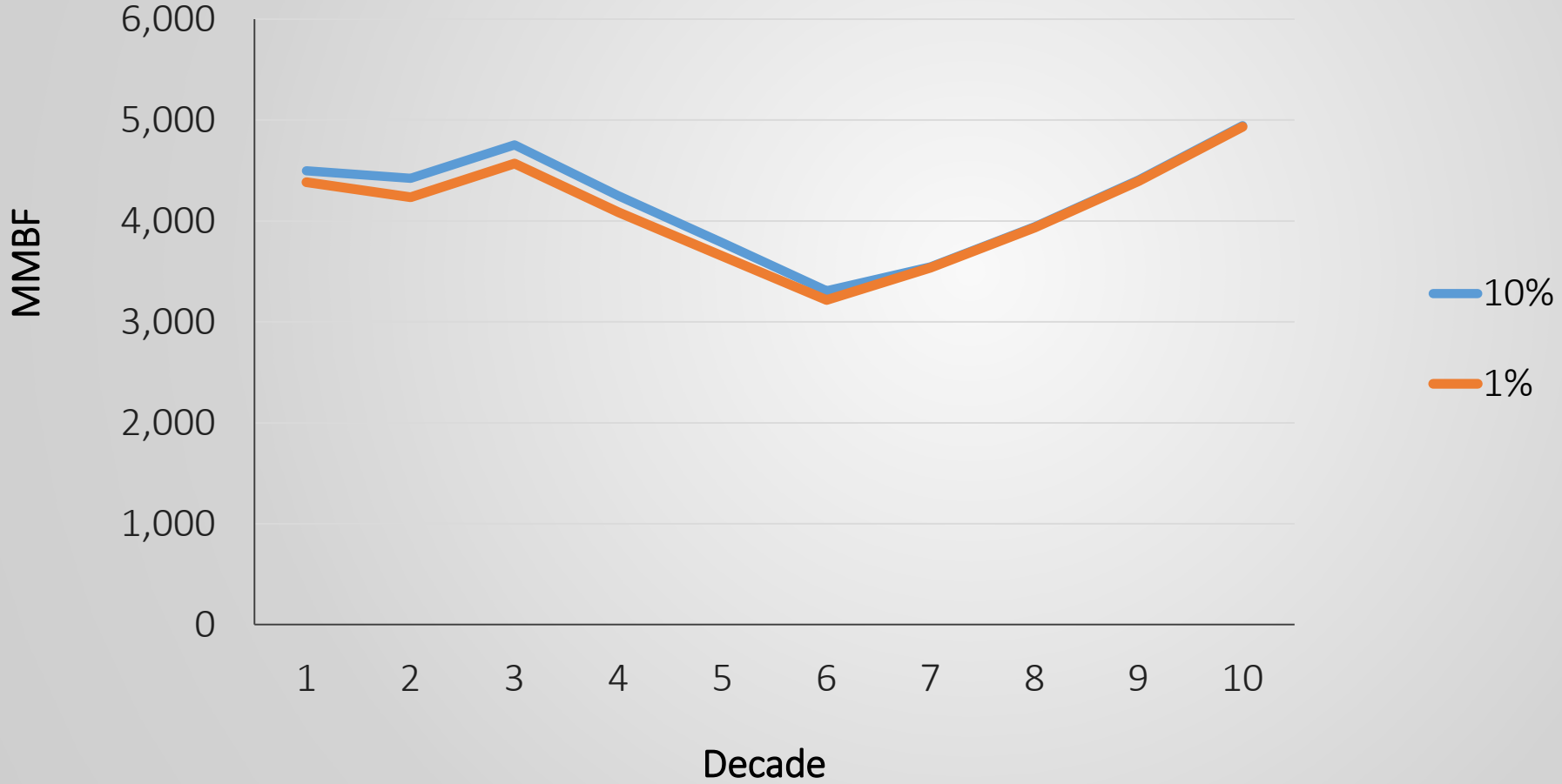
Thin riparian areas up to 10% of the total riparian area in the 5 west-side planning units.

- More than doubles the volume projected under the 1% option, greatly increasing the level of risk of not achieving the target.

Could result in more upland harvest volume to avoid arrearage

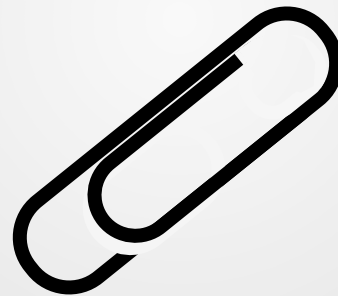


Riparian options across 100 years

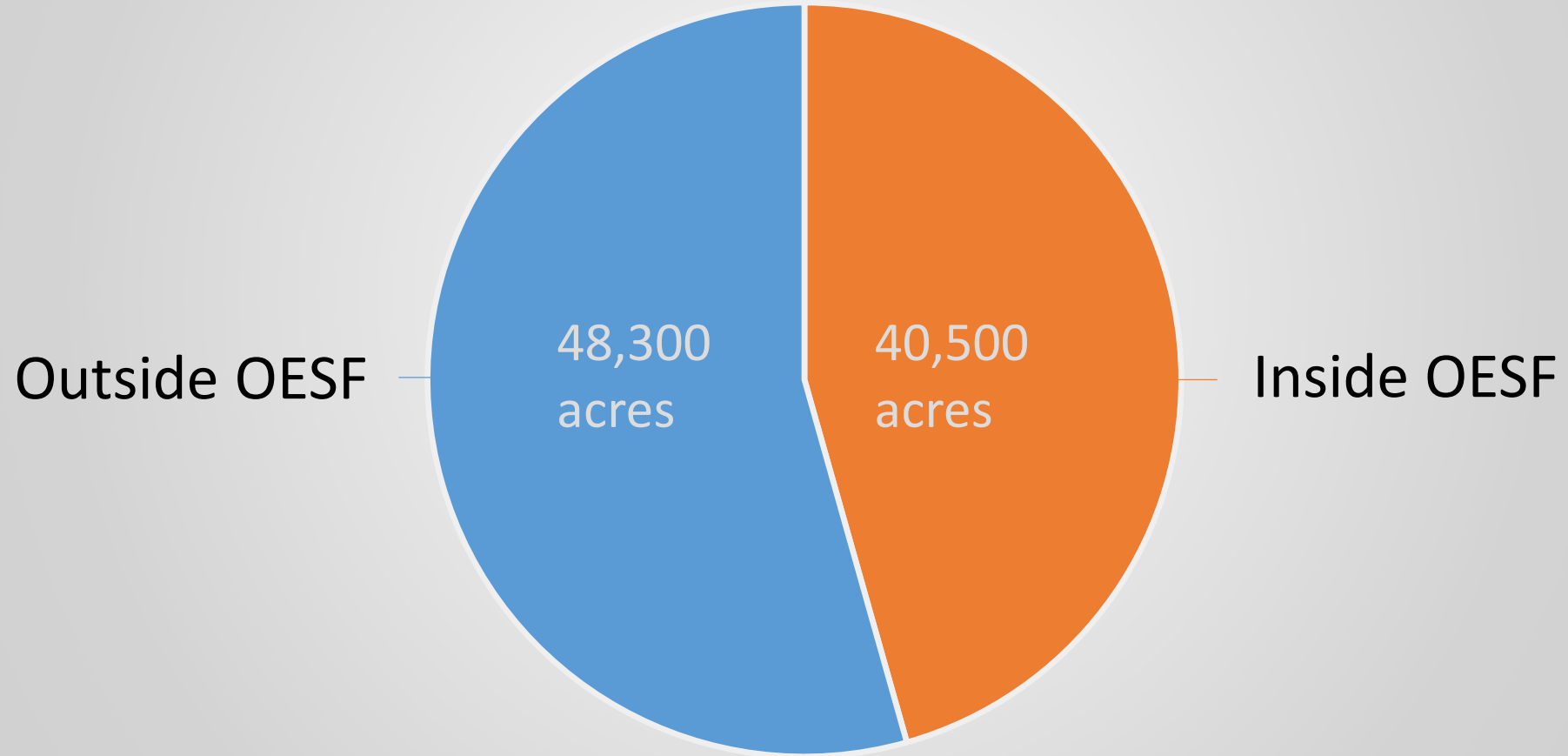


Additional Slides

Including questions from last meeting



Clallam County's forested State Forest Transfer Lands



Lands Managed by the Department of Natural Resources

FEDERAL GRANT LANDS

Common School

K-12 school construction

Agricultural School

Washington State University

CEPRI

Institutions managed by Department of Corrections and Social and Health Services

University

University of Washington

Normal School

Eastern Washington, Western Washington, Central Washington, and Evergreen State

Scientific School

Washington State University

Capitol Grant

Capitol buildings

STATE FOREST LANDS

State Forest Transfer

Counties and junior taxing districts

State Forest Purchase

Counties and junior taxing districts

Community College

Community and technical colleges

WPCD

King County Water Pollution Control Division



FEDERAL GRANT LANDS

Resource Management Costs Account (RMCA)

Legislative Cap: 32%

Current level: 31%

STATE FOREST LANDS

Forest Development Account (FDA)

Legislative Cap: 27%

Current level: 25%



A note on the minimization and mitigation slides:

Since the close of the comment period on the Draft EIS, DNR and USFWS staff have been examining the comments and analysis on the Draft EIS. One common theme has been the interest in reducing the impact of take on the marbled murrelet populations. This has also been described as reducing the risk to the population. In response to this interest, DNR staff have constructed a simplified (aka *back-of-the-envelope type*) calculator to estimate the impact and mitigation numbers. Using this tool, DNR staff have estimated the impact and mitigation effects of different components of marbled murrelet specific conservation and a series of scenarios that reflect conservation strategies that both reduce impact and approximate a balanced impact and mitigation ratio. Exact quantification of the impact and mitigation of any conservation component or strategy requires a complete analysis of the spatial configuration of LTFC under an alternative.

In the impact and mitigation slides data from both the simplified calculator and full spatial analysis are used. The graphs on the right side of the slides showing impact, mitigation and LTFC for alternatives B, D, and E and E+ come from the full spatial analysis. As this analysis does not breakdown impact and mitigation by component results from the simplified calculator are used in the minimization and mitigation graphs on the left side of the slides. The conceptual scenario slide has not undergone a full spatial analysis. All values for this scenario come from the simplified calculator.

DNR staff have worked to upgrade the simplified calculator over time. This version of the calculator estimates impact and mitigation for alternative D and E to within 2 percent of the value found in the full spatial analysis.

When reading the avoidance and mitigation graphs, note that the components are arranged hierarchically. The buffer bar includes any p-stage within the bar, the high quality bar includes p-stage ≥ 0.47 , the conservation area bars show only low-quality habitat in conservation areas since high quality habitat is captured in the previous bar, and so on. The bars only show impact and mitigation due to marbled murrelet specific conservation. Many thousands of acres high and low quality p-stage are included in existing conservation. Existing conservation is included in the graphs showing impact, mitigation, and LTFC for the alternatives as a whole.



Reported Harvest across Land Classes

	Harvest Volume (MMBF)		
Land Classes	Regen ¹	Thinning ²	Total
UPLANDS	4,604 (108%)	386 (45%)	4,991 (98%)
RIPARIAN		48 (20%)	48 (12%)
Total	4,604 (104%)	434 (40%)	5,038 (92%)

¹ Regen = Regeneration harvests including variable retention harvests, clear cuts, seed tree establishment and other harvest activities that retained between 5 and 25 percent of the stand after harvest and include a regeneration treatment of a new commercial cohort

² Thinnings represent all types of commercial thinnings.

⁴ The percentage values in brackets corresponded to the level of attainment of the decadal target after 8 years. For example 125% percent s means the Department has harvested 4,604 MMBF out of the forecast level (4,256 MMBF) of regeneration harvest from the UPLANDS.



