

The BSWI Interdisciplinary Team's Exploration of REA Data and Reports: A journey.



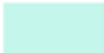
What I will talk about:

- Overview of the BSWI RMP and the important issues
- Datasets we asked for
- Components of the planning process that REA information or reports have influenced
 - AMS
 - Alternatives
 - (Affected Environment and Impacts)
- Examples are of Vegetation related management decisions
- Development/Disturbance Cap



Bering Sea Western Interior Resource Management Plan

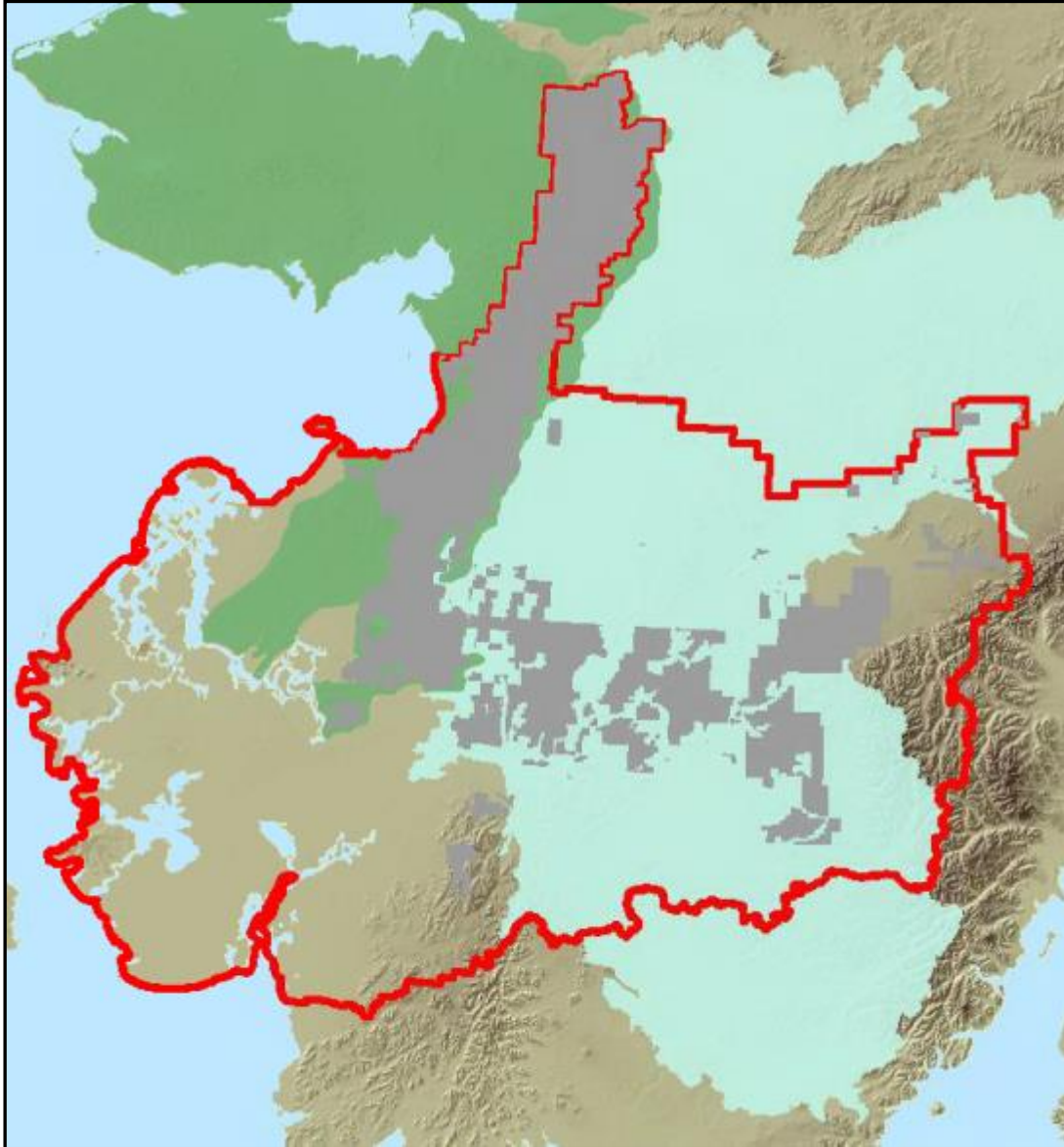


-  BSWI Planning Area
-  Seward Peninsula REA
-  Yukon Kuskokwim REA

Issues identified through the REA MQ prioritization process were generally similar to issues identified in the BSWI planning area.



BLM lands within the BSWI planning area



Major Issues:

- Subsistence: resource availability and access
- Potential for linear utility lines
- Impacts from hard rock and placer mining: water and riparian quality
- Lichen and caribou habitat degradation from OHV, surface disturbing ROWs, but not currently a big issue
- Conflicts between caribou and reindeer grazing
- Climate Change
- (Other stuff like recreation, historic trail, etc.)



Bering Sea Western Interior Resource Management Plan

The BSWI planning team asked AKNHP to provide information about the BSWI planning area by expanding the YKL boundary for these datasets :

Change Agents:

- Snow day Fraction for winter months
- Landcover class and Clime shift
- Habitat quality and Clime shift
- ALFRESCO model
- Permafrost retreat
- Invasive and Non-Native Plant Density
- Modeled Infestation Vulnerability
- Forest Pest damage

Aquatics:

- Connected Lakes
- Disconnected Lakes
- Predicted change in permafrost for aquatics
- Northern pike
- Dolly Varden

Terrestrial:

- Floodplains
- Moose Population Summary
- Caribou Distribution
- Seasonal distribution of moose
- Willow habitat quality model
- Moose primary winter forage
- Post-burn lichen habitat
- Potential Muskox Habitat

Integrated:

- Landscape Condition
- Landscape Intactness
- Cumulative Impacts



Assessment of the Management Situation

Who used REA information or reports?

Ecologist

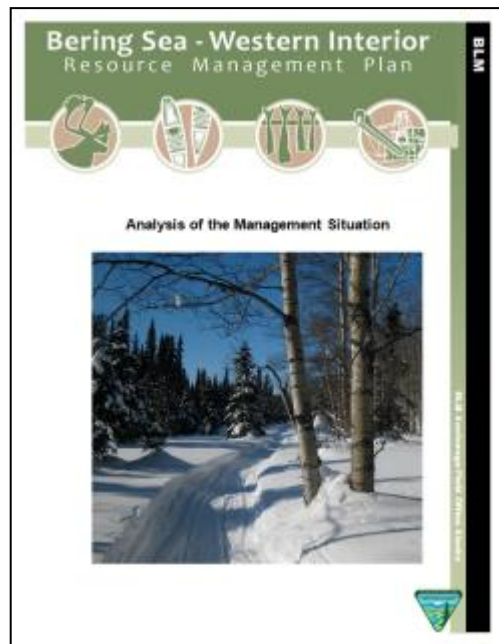
Wildlife Biologist

Fish Biologist

Sociologist

Relevant components that REA provided:

- A synopsis on current conditions of species, habitats, and climate variables
- References
- Textual discussions about current literature and potential trends



BSWI Vegetation Goals

VEGETATION (+Special Status Plants)

Goals

- | |
|--|
| <ol style="list-style-type: none">1. Manage permitted and casual use activities to maintain functional ecosystems that support healthy and diverse communities of native plants and animals, as defined by the BLM Alaska Land Health Standards.2. Sustain and strengthen landscape level ecosystem resiliency to change.3. Prevent the listing of BLM Sensitive plant species under the Endangered Species Act.4. Maintain adequate vegetation to prevent human-related erosion and degradation of permafrost. |
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Vegetation Objectives

Objectives

1. Manage for at least 95% of each vegetation cover class in the planning area to a “very high” condition (as rated by the Landscape Condition Model).
2. Prevent more than 2% of any 5th level (maybe 6th level) HUC from damage caused by OHV travel.
3. Prioritize strategic conservation in parcels near or contributing to the resiliency of existing conservation system units (Iditarod National Historic Trail National Trail Management Corridor, Unalakleet Wild and Scenic River, and neighboring CSUs).
4. Maintain current percent composition (within 20%) for each vegetation cover type within each ecoregion, determined using the Assessment Inventory and Monitoring (AIM) strategy and remote sensing.
5. Prioritize protection and restoration for: (1) anadromous fish; (2) caribou; (3) moose; and (4) reindeer habitats.
6. Protect or restore habitat for BLM Sensitive plant species. Manage for at least 98% of BLM Sensitive plant species habitat in “very high” condition (as rated by the Landscape Condition Model).
7. Increase efforts to inventory vegetation in the planning area.

Permitting for leasable and salable mineral development and Right-of-Ways:

8. Reclaimed areas will achieve 80% vegetation cover within 3 years. Restoration to pre-disturbance vegetation cover levels and self-sustaining ecosystem function will be achieved within 6 years.

Permitting for locatable mineral development:

9. Reclaimed areas will achieve 70% vegetative cover within 3 years with an additional 2-year monitoring period to determine long-term reclamation success.



Alternative Development



Alternatives: OHV travel effects on BLM-sensitive plant species and Caribou habitat

OHV decisions:

If monitoring shows more than 2% of dwarf shrub, lichen, or sparse vegetation habitats are being degraded due to summer OHV use, then travel in those areas will be limited to designated and/or existing routes.

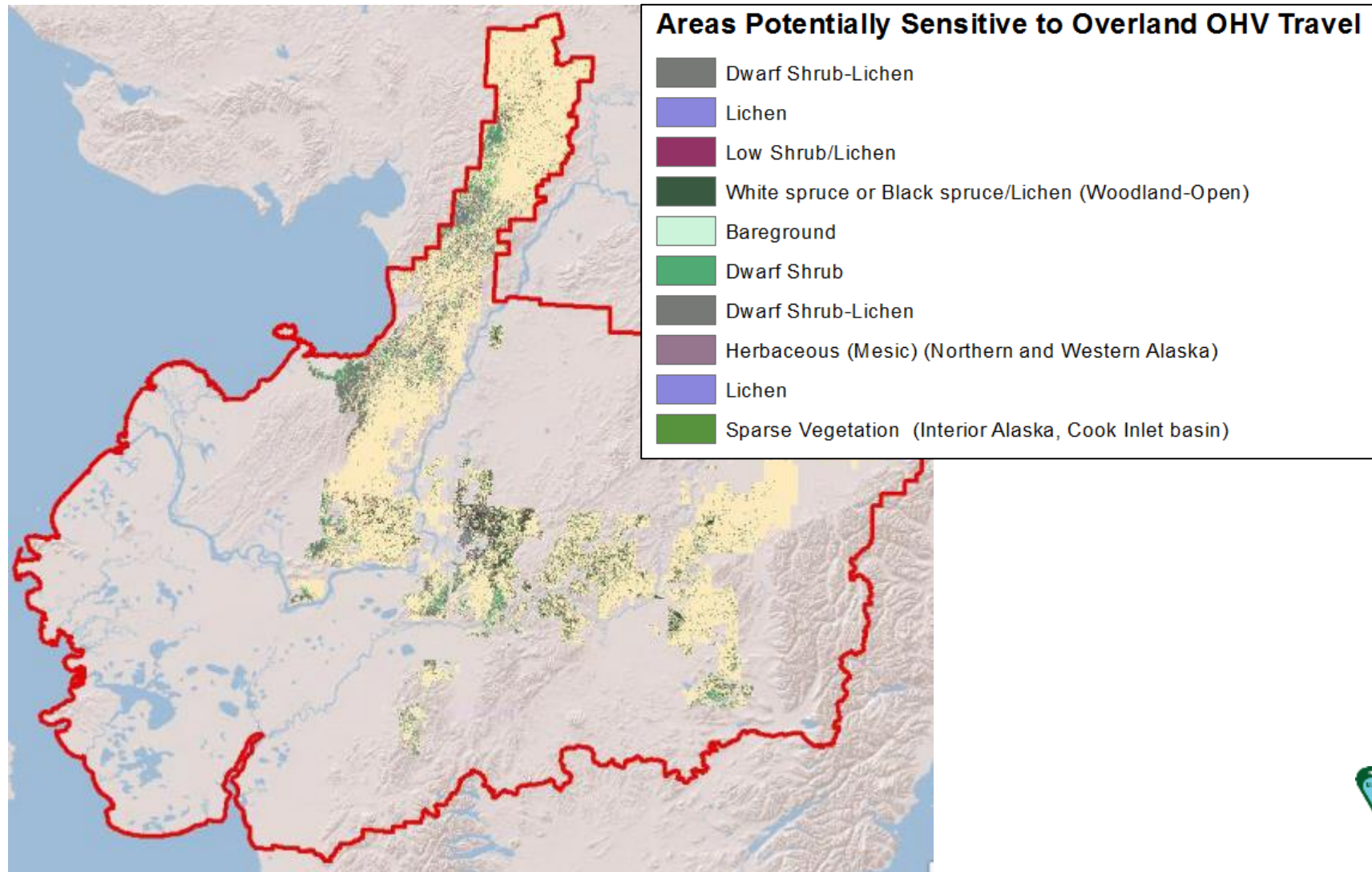
Determination of existing or designated routes would be made at the implementation level through a travel management plan. Applies to casual and subsistence user.

OHV decisions:

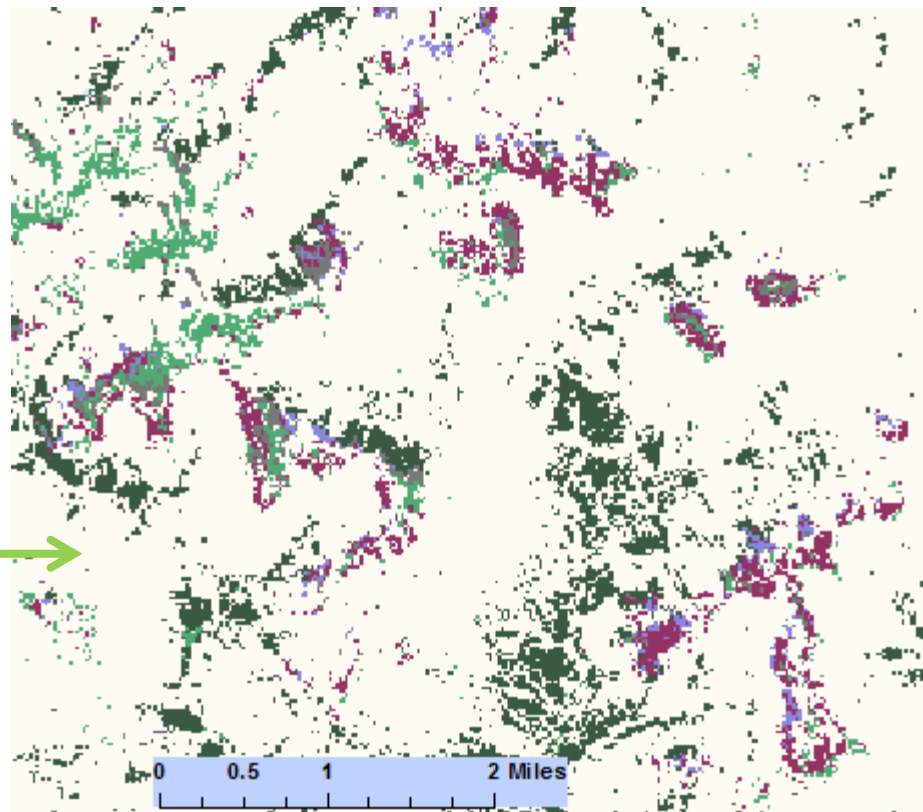
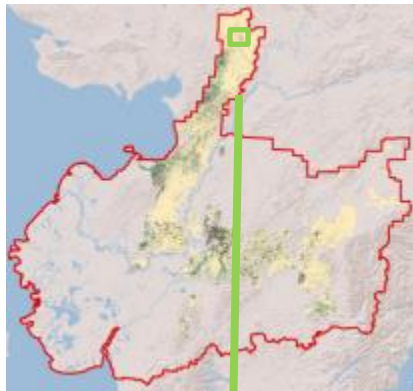
Limited summer OHV use in areas of dwarf shrub, lichen, and sparse vegetation: travel only allowed on existing routes. Applies to casual and subsistence user.



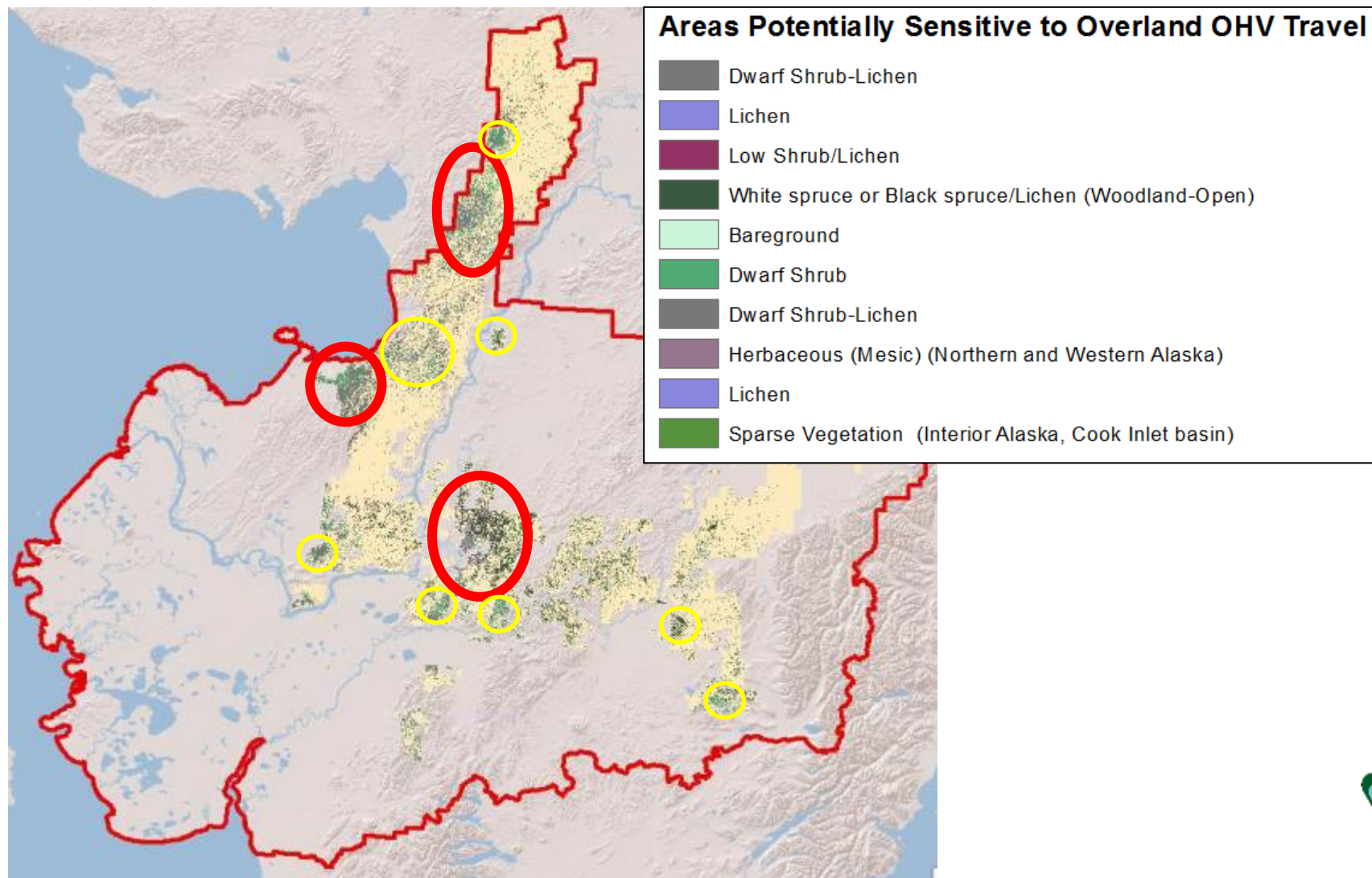
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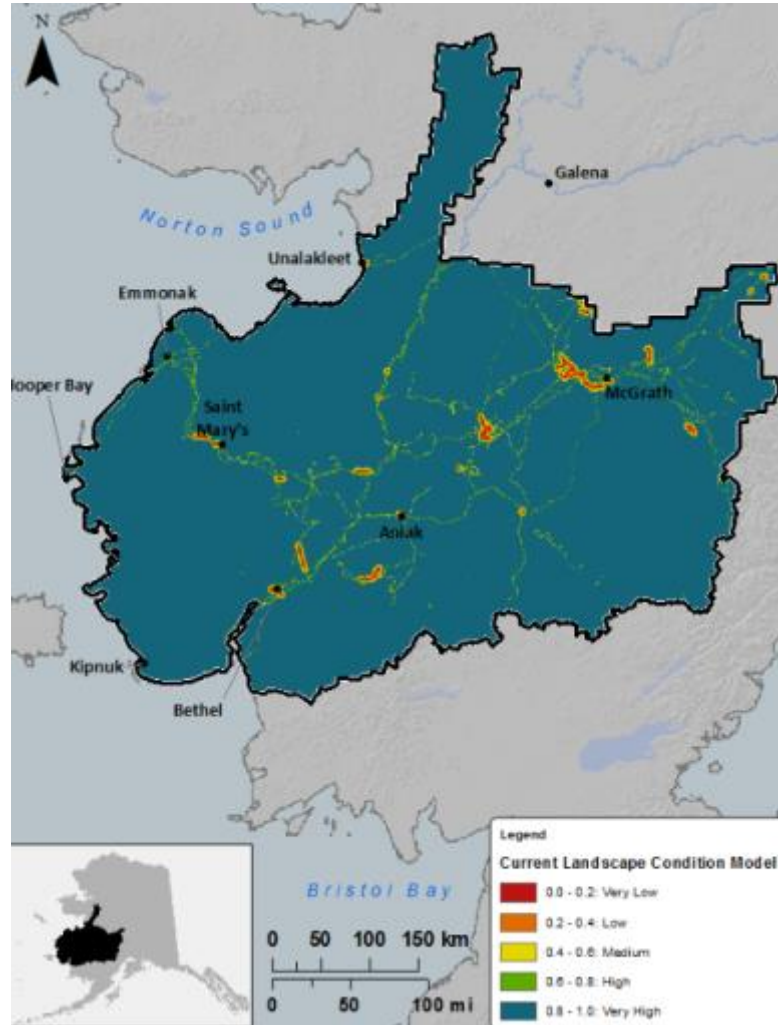
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Alternatives: Actions to protect BLM-sensitive plant species

Permitted Surface Disturbance:

Any surface disturbing activity in known habitat for SSS flora or unique ecosystems, applicants would be required to conduct a vegetation and SSS plant survey using BLM-approved protocol. The map of known habitat will be revised as new information becomes available.

In all other areas, surface disturbing permitted activities over 5 acres are required to conduct a vegetation and SSS plant survey using BLM-approved protocol.

Permittees will receive reporting instructions if SSS plants are found.

Permitted activities will be required to have a 30-meter setback from SSS flora populations when disturbance occurs. Surveys for one-time, short-term disturbance activities.

Permitted Surface Disturbance:

If BLM determines that a permit action has the potential to impact SSS or occurs in a unique vegetation community, a survey is required.

Permittees will receive reporting instructions if SSS plants are found.

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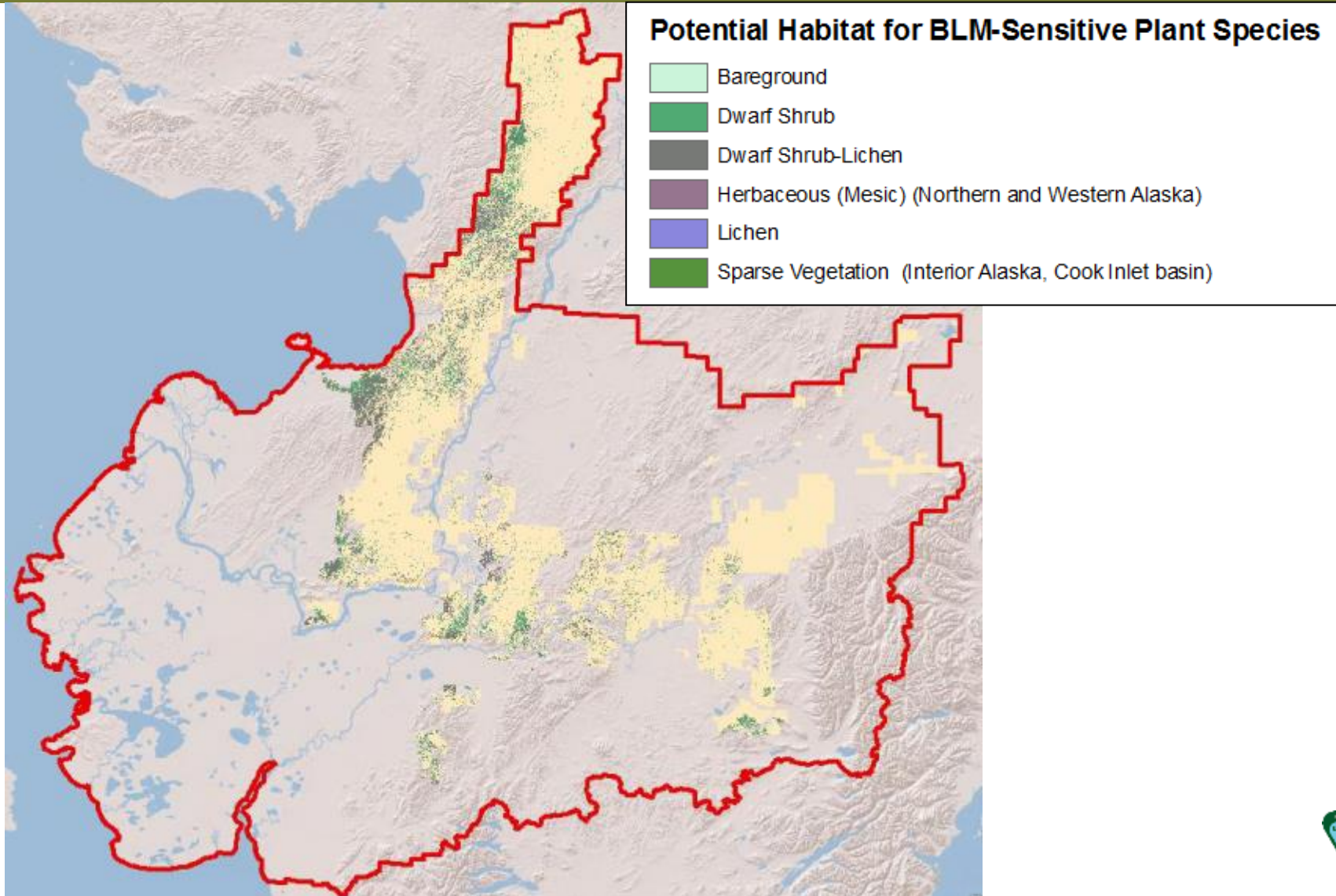
Permitted activities will be required to have a 300-meter setback from SSS flora populations when disturbance occurs. Surveys for one-time, short-term disturbance activities.

Notice level activates or permitted activities that do not result in surface disturbance or emplacement of permanent structures will not be required to conduct SSS surveys, but will receive education from BLM on identification and avoidance of SSS species.

If limestone or serpentine geologic substrate are found during survey or monitoring, Subject to valid existing rights, those areas will be withdrawn from mineral entry to protect sensitive vegetation associated with those geologic substrates.



Alternatives: BLM-sensitive plant species potential habitat



Alternatives: Structured Cumulative Analyses for Permitted Activities

Cumulative Analyses:

A cumulative impacts analysis, using REA or other comparable data, of all disturbances in the 5th level (maybe 6th) HUC watershed will be required during permitting for all proposed surface-disturbing activities.

For leasable, salable and locatable activity, the BLM will require concurrent **reclamation** for permitted activities within each **5th level** watershed (regardless of economic feasibility), if existing permitted impacts exceed 5% within the entire watershed (including land not managed by the BLM).

Surface disturbing activities larger than 5 acres would not be permitted in watersheds expected to experience high potential climate change effects.

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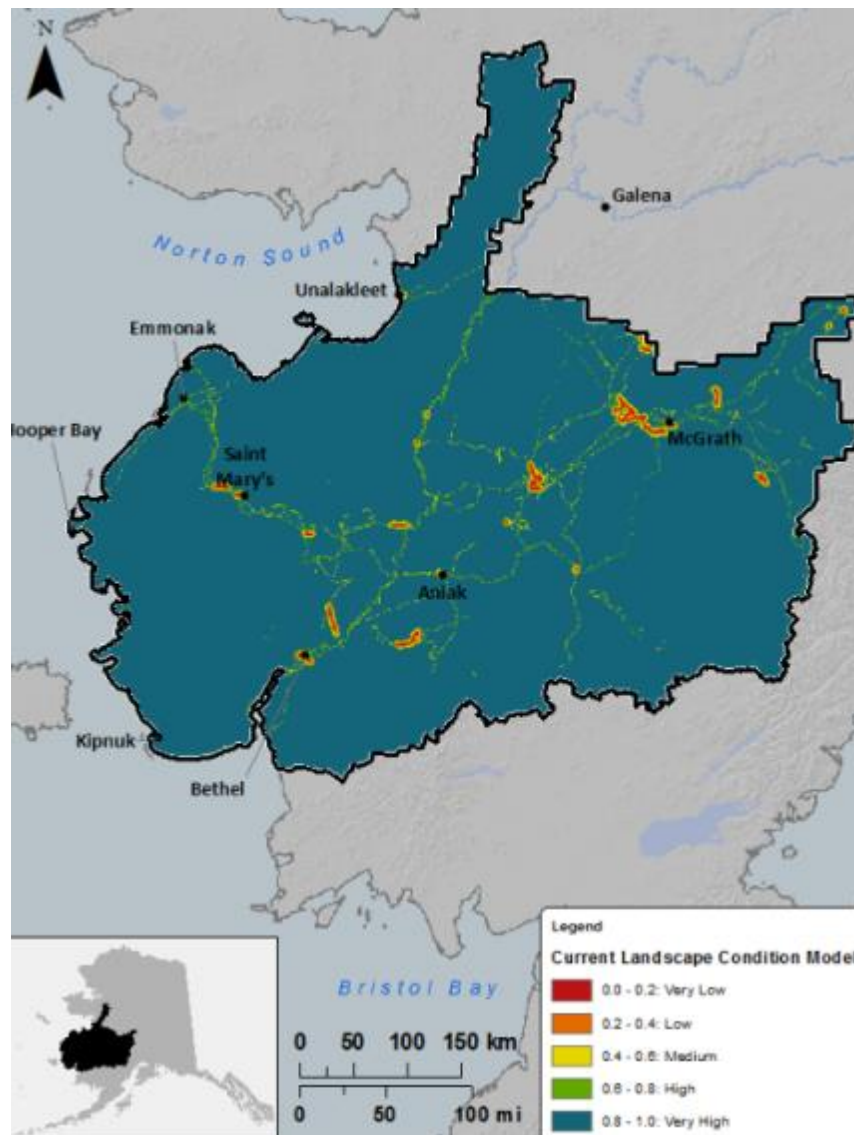
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For leasable, salable and locatable activity, the BLM will require concurrent **restoration (not reclamation)** for permitted activities within each **6th level** watershed (regardless of economic feasibility), if all existing impacts exceed 5% within the entire watershed (including land not managed by the BLM).

In areas identified as high potential climate change, if climate change impacts result in increased permafrost melt, reduced lichen habitat, x, and x, then all surface disturbing activities larger than 5 acres would not be permitted in those watersheds



Alternatives: Structured Cumulative Analyses for Permitted Activities



Alternatives: Management to address climate change

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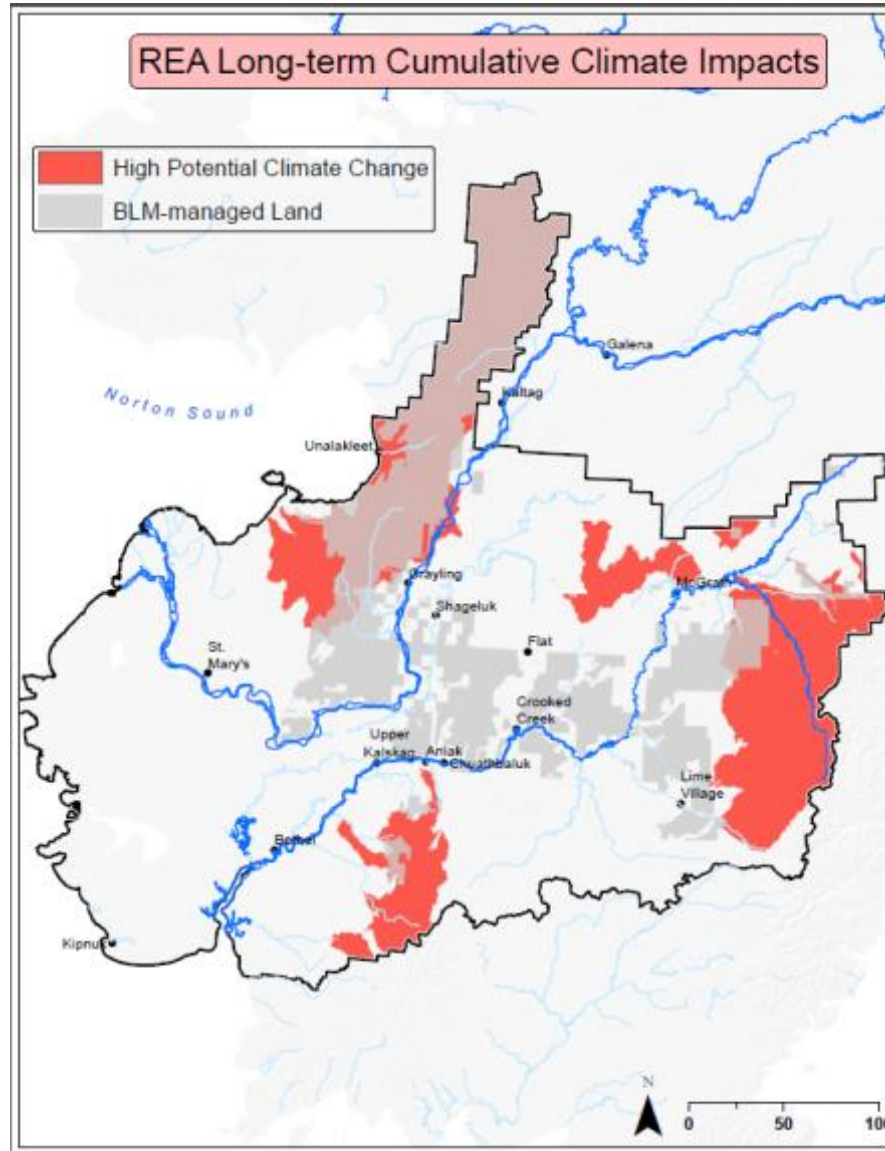
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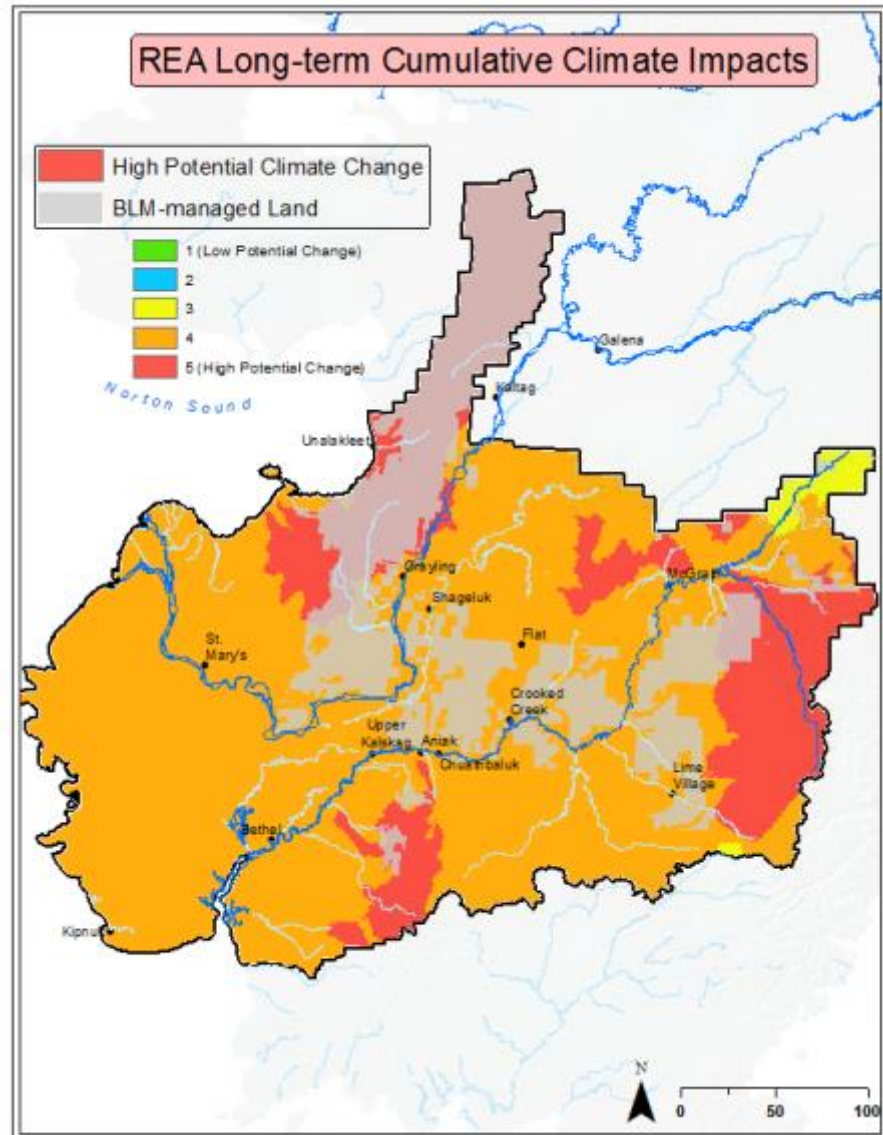
In areas identified as high potential climate change, if climate change impacts result in more than 5% disturbance in a watershed then all surface disturbing activities larger than 5 acres would not be permitted in those watersheds.



Alternatives: Management to address climate change



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Alternatives: Minimizing caribou and reindeer interaction

Caribou Avoidance:

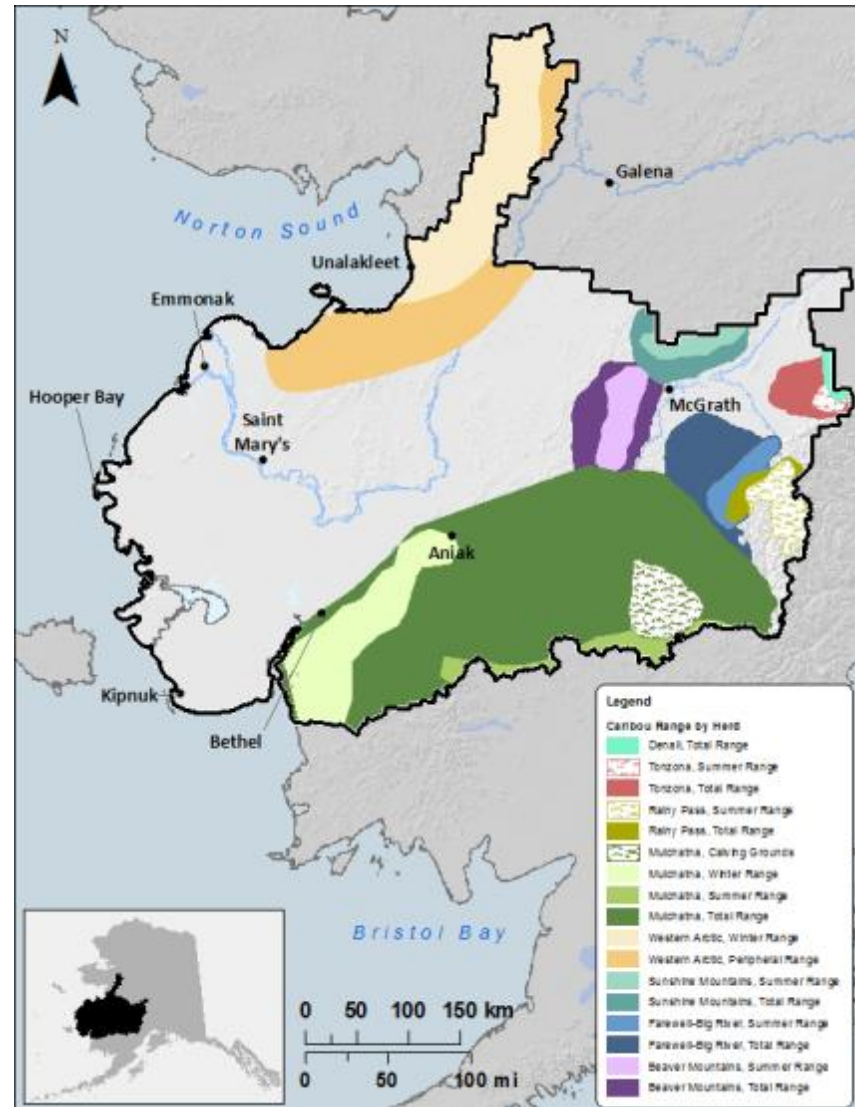
Permitted grazing would not be allowed in caribou habitat that is known for current or historic use within the past 20 years. (Caribou current and historic use is based on information available from satellite collar data and documented patterns of use.)

A minimum 5-mile buffer between known caribou habitat and permitted grazing ranges would be required.

Caribou Avoidance:

Permitted grazing would not be allowed in caribou habitat that is known for current or historic use within the past 5 years. (Caribou current and historic use is based on information available from satellite collar data and documented patterns of use.)

A minimum 10-mile buffer would be maintained between known caribou habitat and permitted grazing ranges would be required.



Chapter 3: Affected Environment

Purpose of Chapter 3: to “succinctly describe the environment of the area(s) to be affected or created by alternatives under consideration (CEQ 1502.15).

REA data and reports will likely be used to describe the current conditions of:

- Wildlife
- Fisheries
- Vegetation
- Socioeconomics of Communities

Especially for how climate change has and will likely affect those resources.



Chapter 4: Impacts

Since planning level decisions are fairly broad in scope and context, REA data may be extremely useful for doing quantitative analysis of impacts due to proposed management decisions.

For example:

If BLM parcels that are currently CLOSED to metalliferous mineral development (i.e. mining for gold) are OPENED to metalliferous mining through these planning decisions:

- how many acres of high quality moose habitat may be impacted.

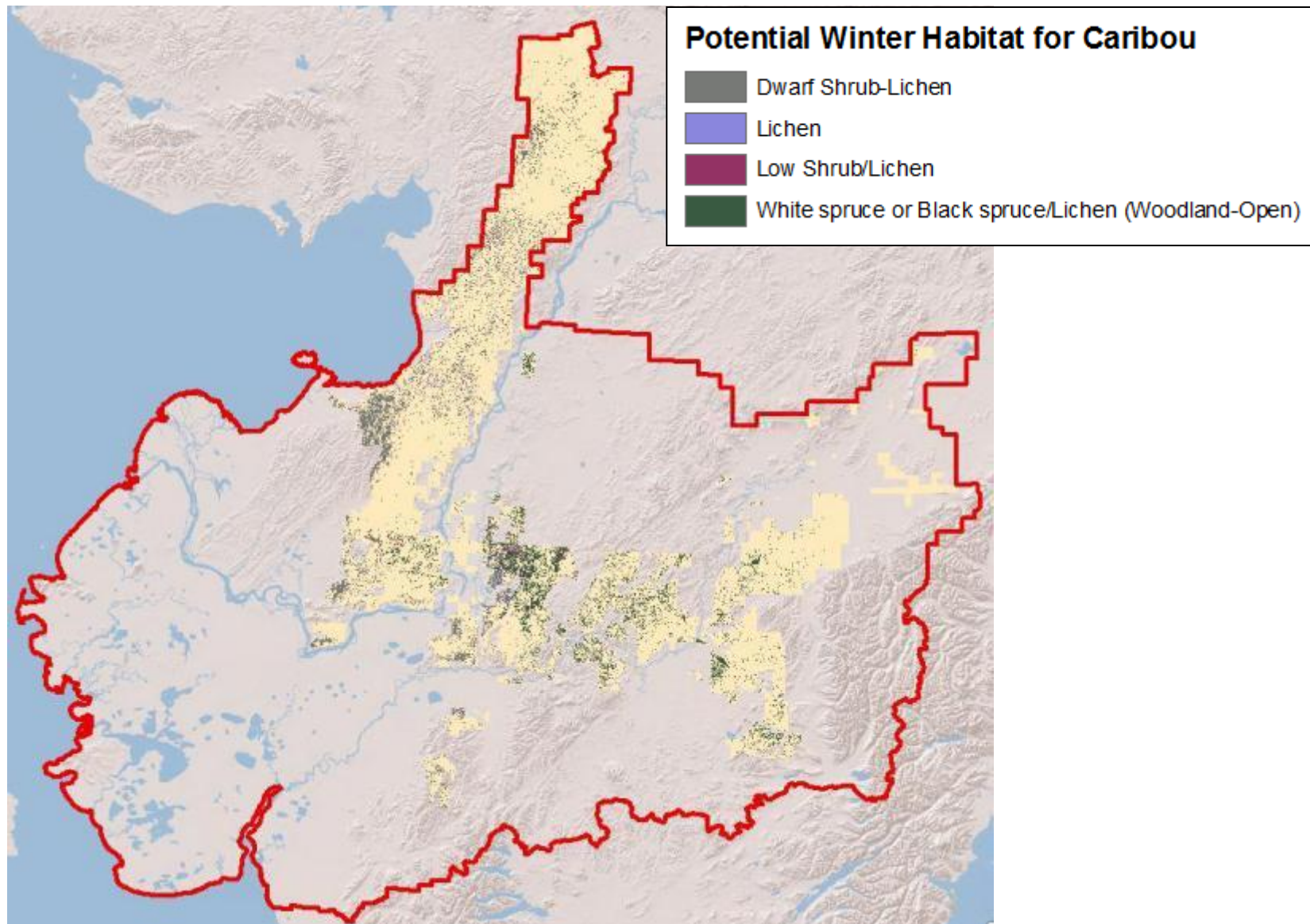


This is only the beginning....

Questions? Comments?
Something you want to point out?



Alternatives



- BSWI Resources Issues:
- OHV travel – unclear how much damage is occurring in this planning area. No inventory,
- Reindeer and Caribou conflict –
- Land Condition Model – Cumulative Impacts due to human development – 5% cap on impacts per 6th level HUC
- Tried to have different management for areas to be highly impacted by climate change. Too big, however, its help AFO identify the Nulato Hills as the primary region in this planning area for conservation focus. Most ACECs (current and proposed) occur in this ecoregion. Important for BLM-Sensitive plants, caribou, lichen habitats, and climate change is expected to be more severe in this area over others. However, the BEACONS work says that this Ecoregion already has enough benchmarks (but this assumes that ACECs have more protection than non-ACEC land, which for BSWI at this point is untrue. BSWI ACECs do not have any different management prescriptions, they are currently just a name. However, we can have new ACECs with different management.
- Climate change stuff is great to be aware of, but maybe we would have come up with the same stuff even without geospatial data?
- How I see the SNK and YKL data being used in the future:
- I think the Land Condition Model can fulfill our need for a tool to help us determine the % development impacts to a watershed to ensure we are under the cap. However, it might not be the right tool, the buffering effect might not be what we can enforce.

