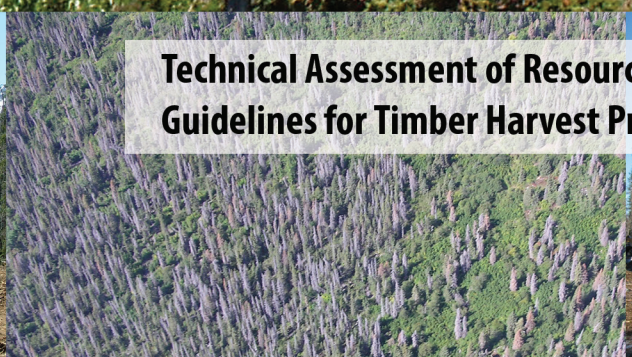
Integrated Landscape Plan For the Champagne and Aishihik Traditional Territory



Technical Assessment of Resources, Management Priorities and Guidelines for Timber Harvest Project Planning

PREFACE

This document is the final version of the *Integrated Landscape Plan* for the Champagne and Aishihik Traditional Territory that was made available to the public in March 2006. The draft version represented the culmination of work by members of the Resource Assessment Technical Working Group at that time. Information was gathered from communities and the general public, as well as many other resource management experts. This information will become an integral part of the Timber Harvest Projects to be initiated in the next phases of the Strategic Forest Management Plan implementation.

The original draft version has been reviewed and edited with the intent to produce a more concise document for use by resource managers, and a wider public audience. The review committee included representatives from Champagne and Aishihik First Nations, Yukon government (Forest Management Branch), and Parks Canada. The revision and editing process was facilitated by an independent contractor.

This Integrated Landscape Plan is the primary document to be used for guiding the development of timber harvesting and/or fuel abatement projects.

The Integrated Landscape Plan has been written as a landscape level technical planning and operating tool, focusing on defining areas and stating priorities within the Champagne and Aishihik Traditional Territory [1] (CATT) for forest planning. The plan also provides statements of priorities and general strategies for the defined zones, and guidelines for the development and implementation of Timber Harvest Project planning and the associated forestry operations. The primary audiences for the *Integrated Landscape Plan* are:

1) Those responsible for developing and implementing Timber Harvest Projects, and

2) Those responsible for carrying out on-the-ground forestry operations and related activities.

Purpose

The purpose of the *Integrated Landscape Plan* is to provide guidelines for sustainable Timber Harvest Project planning for the forested land base within the *CATT Strategic Forest Management Plan*. It is the first step to defining specific zones within which forest-based projects can be undertaken. This plan is intended to contribute to achieving a forest based economy, a key component of regional economic stability, while protecting and integrating ecological, traditional, resource, heritage and other community values. It is also intended to provide clear practical guidelines for forest managers and planners. This document builds on the *CATT Strategic Forest Management Plan* which established what issues and concerns, values and interests must be addressed as forest development planning moves forward within the CATT.

Background Information

The *Integrated Landscape Plan* is the result of more than a year of work by the Resource Assessment Technical Working Group (RATWG) to implement the *Strategic Forest Management Plan*. The strategic plan set forth a broad set of goals and objectives for subsequent levels of planning. The *Integrated Landscape Plan* provides a summary of timber inventory information, identifies management zones, and sets out guidelines to assist implementing the *Strategic Forest Management Plan*.

[1] In this document, "Champagne and Aishihik Traditional Territory" refer only to those areas that do not overlap with adjacent other First Nations' Traditional Territories –see key map.

Other plans or related activities will need to be initiated to achieve all of the goals and objectives of the strategic plan, including community fuel abatement plans, training and education plans, research and monitoring plans, as well as activities by either government to promote economic development.

Outcome of Assessment Process

The *Integrated Landscape Plan* assessment of resources and values in the CATT resulted in the creation of three management zones.
These zones generally define where Timber Harvest Project activities can or cannot occur. Figure 1 shows the zone locations within CATT.

1) Forest Resource Management Zone (Green):

Timber Harvest Project planning and development can occur in this zone.

- The zone is shaded green –on the key map (refer Figure 1).
- 93,700 hectares (or 38% of all forest area, or 4.8% of the CATT).
- A timber inventory estimate of 2,741,000 cubic meters.
- Two sub-zones defined for special management.

a) High Wildlife Value Areas

This represents 86% of the forest management zone; priority is for harvesting to accommodate wildlife and habitat management concerns. Forest harvesting will generally take place with a "lighter footprint".

b) Fuel Abatement Areas

Forest management strategy priority is for fuel abatement (fire hazard reduction) in areas surrounding communities.

2. Provisional Forest Management Zone (Yellow):

This zone represents areas currently not considered for Timber Harvest Project planning but may be considered in the future following an evaluation of the harvesting activities in the Forest Resource Management Zone.

- The zone is shaded yellow on the key map (refer Figure 1).
- The zone is 70,000 hectares (28 % of all forest area or 3.6% of the CATT).
- A timber inventory estimate of 1,759,000 cubic meters.

3. Conservation Forest Management Zone (Orange):

No commercial forest operations are to be planned in this zone. Non-timber values take higher priority in this zone.

- The zone is shaded orange on the key map (refer Figure 1).
- The zone is 83,150 hectares (34 % of all forest area or 4.4% of the CATT).
- A timber inventory estimate of 1,823,000 cubic meters.

Integrated Landscape Plan Guidelines

The *Integrated Landscape Plan* (ILP) outlines a set of guidelines that define the acceptable forest management practices. These were developed based on:

1) Goals and objectives in the *Strategic Forest Management Plan.*

2) Management zone priorities defined in the *Integrated Landscape Plan.*

3) An assessment of the environmental, socio-economic and cultural values within the Traditional Territory.

4) Lessons learned through public consultation processes.

5) A peer review process.

6) An assessment of other best-management forestry practices guidelines used elsewhere.

The guidelines in this plan are planning guidelines that are written for those developing *Harvest Development Plans,* hereafter referred to as *Timber Harvest Projects*, which include all aspects of forest harvest and renewal operations.

Harvest Level Determination

The available volume of wood for *Timber Harvest Projects* has been agreed to by the Champagne and Aishihik First Nations and the Yukon governments. The recommendation and decision considered directions from several key documents: the *Implementation Agreement* (March 2004), the *Strategic Forest Management Plan* (Dec. 2004), the draft *Integrated Landscape Plan* (March 2006), and the *Timber Supply Scenarios for the Champagne and Aishihik Traditional Territory* (March 2006).

Timber Harvesting Projects and This Plan

This *ILP* states the priorities for *Timber Harvest Project* planning as the result of an assessment of values and related social, economic and environmental limitations.

The maps in Section 6 provide guidance for locating timber harvesting areas.

The Champagne and Aishihik First Nations and the Yukon governments agreed to manage their respective lands within CATT following the intent and guiding principles of the *SFMP* and this *Integrated Landscape Plan.*

Monitoring and Adaptive Management

The *Strategic Forest Management Plan* stipulates that the *Integrated Landscape Plan* is to apply between five and twenty years. Performance will be measured annually through monitoring of indicators set out in the *Strategic Forest Management Plan*, and reported in the Monitoring Report. Performance will be reviewed based on experience gained from these evaluations.

The development of the *Integrated Landscape Plan* is based on the best-available knowledge. A precautionary approach will be adopted that emphasizes the application of risk assessment for management decisions in order to avoid undesirable and irreversible outcomes. An adaptive management strategy for research and monitoring programs will be developed and facilitated by the Research and Monitoring Technical Working Group (RMTWG), under direction of the Forestry Working Group (FWG) that was established to ensure the next phases of the *Strategic Forest Management Plan* are implemented. Local resource management expertise, scientists, industry and local community members will participate in developing responses to the results seen from forest management activities.

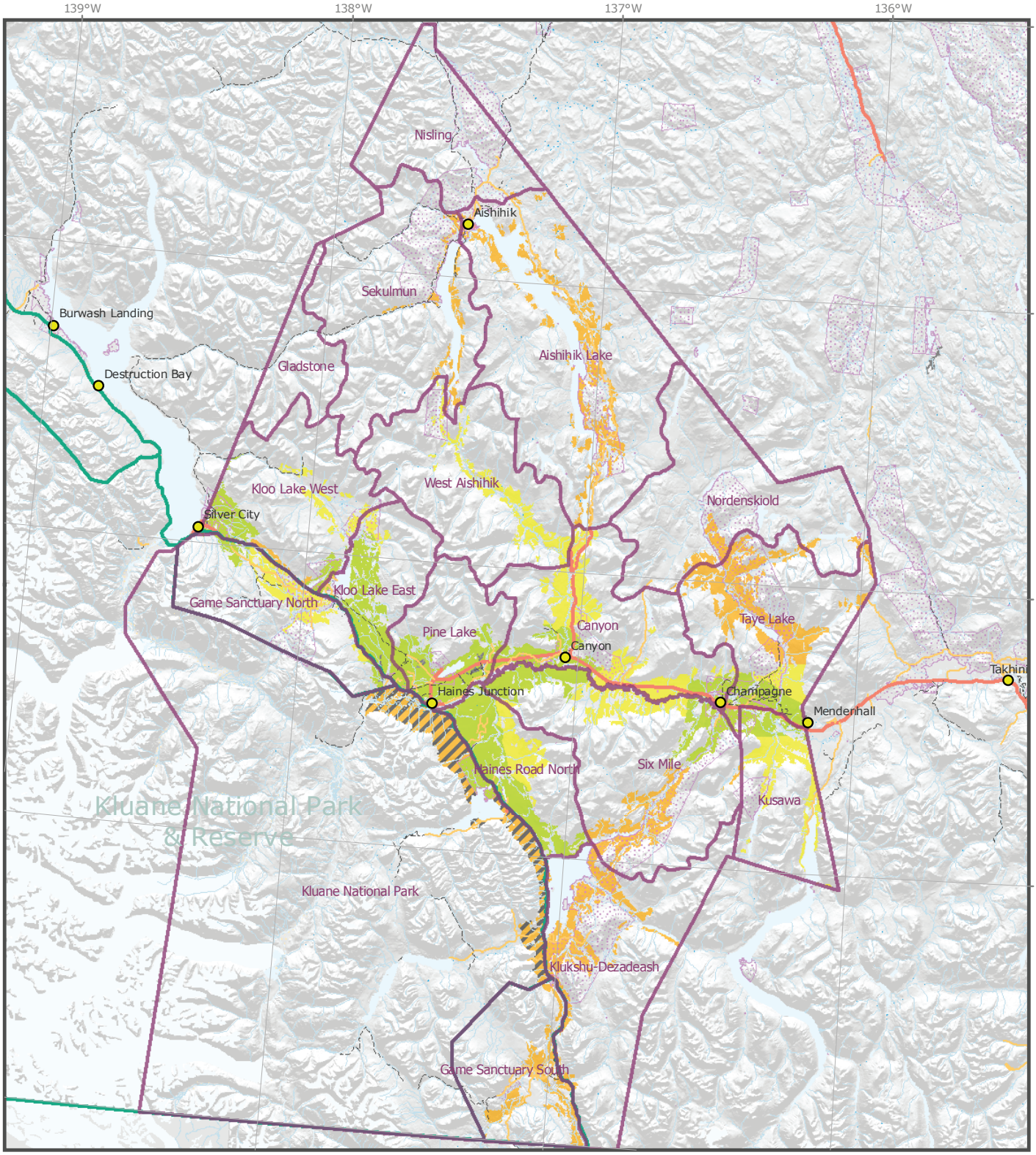


Figure 1:
SFMP Landscape Units & Resource Management Zones

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan:2006

0 12.5 25 50
Kilometers

Albers Equal Area Projection

- Communities
- Kluane National Park & Reserve
- SFMP Landscape Units
- CAFN Settlement Lands
- Road
- Limited-use road
- Trail
- Cut line
- Logging Roads

Resource Management Zones

- Forest Resource Management Zone
- Conservation Forest Management Zone
- Provisional Forest Management Zone
- Kluane NP DRAFT Fire Abatement Area

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

1.1 Strategic Forest Management Plan Goals

In March of 2004, an Implementation Agreement was signed between the Champagne and Aishihik First Nations and the Yukon governments. This enabled the *Strategic Forest Management Plan* process to move forward into landscape planning for the promotion of a viable and sustainable forest industry emphasizing a balanced approach to managing the ecological and social needs within the Champagne and Aishihik Traditional Territory.

Key highlights from each goal:

A. Maintain Functioning Forest Ecosystems

- Conserve forest productivity and biological diversity,
- Maintain health and vitality of forest ecosystems,
- Recognize that disturbances are a vital part of forest ecosystems, and
- Establish an adaptive management strategy to monitor results and respond to changes to enable goals to be met.

B. Community Sustainability and Benefits

- Encourage development of a forest-based economy that reflects local community needs and values,
- Foster the coexistence of diverse forest users,
- Maintain or enhance the social and economic well being of forest users and local communities in the region,
- Achieve a forest economy with economic stability, diversity and viability, and
- Manage for a variety of timber and non-timber values, and consumptive and non-consumptive values.

C. Cooperative Forest Planning and Management

- Respect the rights and interests of all forest users,
- Facilitate sharing of the local, traditional and scientific knowledge and resources between resource planners,
- Engage public discussion and participation in planning,
- Identify lands available for timber harvesting and other uses, and
- Establish guidelines for roads and trails to access forest resources.

D. Build Local Capacity

- Assist in the development of skills and infrastructure to support a forest-based economy within the Champagne and Aishihik Traditional Territory, and
- Support Champagne and Aishihik First Nations through programming and partnerships to build technological capacity and infrastructure in forest management and planning.

1. INTRODUCTION

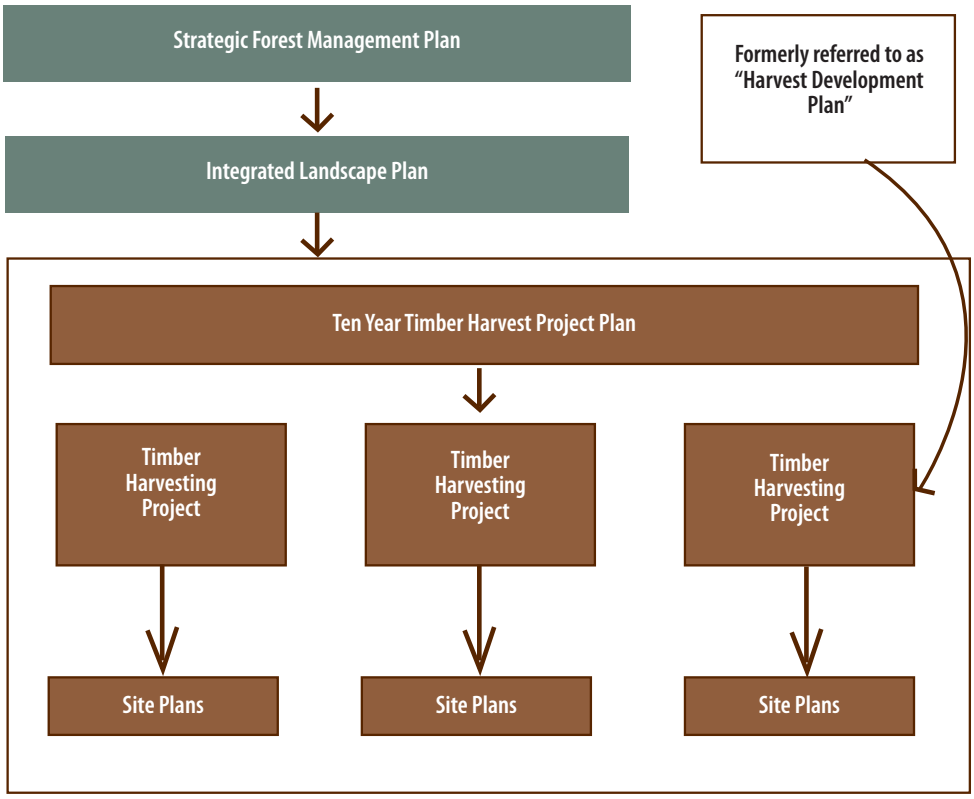


Figure 2: Planning Hierarchy from the Strategic Forest Management Plan

The SFMP document will be reviewed within five years to update goals and objectives for the CATT area.

The Integrated Landscape Plan fits within a hierarchy of plans as defined in the *Strategic Forest Management Plan* (see figure 2). The *Integrated Landscape Plan* is to provide guidance for the Timber Harvest Projects and Site Planning stages.

The *Integrated Landscape Plan* is to assist the achievement of the *Strategic Forest Management Plan* goals by providing the following forest management information:

1) A technical analysis of resource values in the Champagne and Aishihik Traditional Territory. It is to be part of the basis to recommend a harvest volume, focusing on salvaging spruce bark beetle-attacked trees.

2) Identification of broad areas where Timber Harvest Project development should or should not occur.

3) Guidance for the Timber Harvest Project and Site Planning stages, respecting other existing plans or guidelines relevant to the management of natural resources of the region.

4) Strategies for reducing or eliminatingsignificant negative effects on other resources and values, and strategies for achieving social, economic and environmental benefits in the Traditional Territory.

The *Integrated Landscape Plan* will be reviewed in five years to assess the success of the guidelines in achieving the *Strategic Forest Management Plan* goals.

The groups who assisted in the design and implementation of the *Integrated Landscape Plan* are identified in Appendix 1.

The Integrated Landscape Plan summarized the best available data, expertise and local knowledge for the plan area to provide guidance to Timber Harvest Project planning. As this is a community-based plan, there has been a particular emphasis on applying local knowledge and expertise to assist in this resource assessment.

2.1 Approach

The Strategic Forest Management Plan directs the Integrated Landscape Plan to identify areas where forest harvesting can or cannot occur. It also required that the planning process produce a technical analysis of the resource and resource values in the Champagne and Aishihik Traditional Territory.

The Resource Assessment Technical Working Group (RATWG) initially sought to define specific areas in Strategic Forest Management Plan area as "go," "no go" or "go light" for timber harvesting through a broad resource and values assessment. A zoning scheme was developed to accomplish the goal.

Two types of information were used in the assessment: scientific data and local/expert knowledge. Assessing information from these two sources provided the Resource Assessment Technical Working Group with a rationale for classifying each area.

Some of the important values considered include heritage and cultural, traditional, tourism, viewscapes, wilderness, wildlife, biological diversity, connectivity, community safety from wildfire risk, timber, and the economy.

A brief summary of the assessment process is outlined in the following sections.

2.2 Forested Areas Assessment

The forested areas assessment was completed using the Yukon government forest inventory, which has classified timber and non-timber vegetation types over the CATT area. The detail of the Yukon Forest Inventory procedure for its assessment is set out in the Yukon Forest Cover Manual.

Potential timber harvest areas in high priority landscape units (also known as "Planning Areas" defined by the Strategic Forest Management Plan) were shaded green on the key maps (refer Figure 1). Areas for possible future harvest planning were shaded yellow. Areas to be reserved from commercial harvesting were shaded orange.

2.3 Timber

An assessment of timber volumes available in the Strategic Forest Management Plan area was made in 2005 by the Forest Management Branch, Department Energy Mines and Resources, Yukon government.

Figures 6 to 20 included in Appendix 3 of this report give a brief visual description of the location of the timber resources.

This inventory was re-summarized by the Forest Management Branch following a RATWG request in early 2006. The report estimated there to be 6.3 million m3 within the CATT area. The Forest Resource Management Zone timber volume was estimated to be 2.7 million m3, with 2.2 million m3 of that volume within High Wildlife Value areas.

See Tables 1 and 2.

Table 1. Area (ha) conifer timber volume (m3) in CATT and Forest Resource Management Zones

Landbase	Area (est. hectares)	Percentage of total area of CATT	Volume est. m^3
Champagne and Aishihik Traditional Territory (CATT)	1,959,000	100	
CATT without Kluane National Park and Reserve	1,364,000	69	
Total forest area in CATT (not incl. KNP&R)	249,500	13	6,323,000
Total forest in Forest Resource Management Zone	93,700	4.8	2,741,000
Total forest in Provisional Forest Management Zone	70,000	3.6	1,759,000
Total forest in Conservation Forest Management Zone	85,800	4.4	1,823,000

Table 2. Distribution of conifer timber volume (m3) in Forest Resource Management Zone

Landbase	Area (est. hectares)	Percentage of total area of CATT	Volume est. m3
Forest Resource Management Zone	93,700	100	2,741,000
High Wildlife Value Areas	81,300	86	2,273,000
Outside of High Wildlife Value Areas	12,400	14	468,000
Stands greater than 75m3/ha (high volume): total	11,900	13	1,253,300

2.4 Access Assessment

The existing major roads within the Strategic Forest Management Plan area are shown on the key map (refer Figure 1). A summary of the length and road density of the major roads are shown in Table 3.

The road classes include (refer Figure 1):

a. All weather roads that are available in summer and winter. They are shown as red on the key map. This includes the Alaska Highway, the Haines Highway, Aishihik Road and the Kusawa Road.

b. Dry weather or winter use roads are shown as Limited Use Roads. These are identified as yellow lines on the maps.

c. Logging Roads are shown as dashed black lines.

Any new access or changes to the existing access category requires that any proponent prepare an application describing the proposed change for review and approval by government. Field engineering, design, and construction will follow procedures set out in the Timber Harvest Planning and Operating Guidebook (THPOG) (1999).

Table 3. Estimated existing road length and density within the Forest Resource Management Zone per Strategic Forest Management Plan Landscape Units (also referred to as Planning Areas).

Landscape Unit (also referred to as Planning Area)	Total area (sq. km.)	Primary roads (km.)	Other roads (km.)	Total roads (km)	Road density (km./ km2)
Canyon	900.36	98.9	83.3	182.2	0.20
Haines Road North	461.30	10.9	24.3	35.2	0.07
Kloo Lake East	418.42	22.0	44.8	66.8	0.16
Kloo Lake West	753.51	25.6	26.3	51.9	0.07
Kusawa	488.83	18.5	0.6	19.1	0.04
Pine Lake	454.97	59.3	71.4	130.7	0.28
Game Sanctuary North	582.37	20.2	64.5	84.7	0.14
Six Mile	1182.59	2.9	0.7	3.6	0.003
Taye Lake	861.68	15.7	56.6	72.3	0.08

2.5 Wildlife and Habitat Assessment

High Wildlife Value Areas were identified within the Forest Resource Management Zone to highlight important habitat for a wide range of species, with emphasis on special features such as important seasonal habitat and landscape corridors for selected species. The current mapping was done with a broad-brush approach; the High Wildlife Value areas cover 86 percent of the Forest Resource Management Zone in this preliminary assessment. The areas are shown in Appendix 3. More detailed mapping should occur with the development of new Timber Harvest Projects.

The areas identified in this exercise were not meant to act as strict reserves, but rather as areas where forestry operations include managing for wildlife and wildlife habitat as a priority.

2.6 Community Fire Risk Assessment

The Strategic Forest Management Plan and the Implementation Agreement identified community fire risk management as one of the highest priorities. Joint work between the Fuel Abatement Technical Working Group (FATWG) and the Resource Assessment Technical Working Group (RATWG) resulted in the development of a set of zones surrounding several communities as highest priority for fire hazard reduction initiatives. It was determined that some of these areas may be suitable for planning for future Timber Harvest Projects, as harvesting is acknowledged by the Fuel Abatement Technical Working Group to be a useful tool in reducing fuel loading. The type of forest cover, fuel type, terrain attributes, and prevailing wind direction, community infrastructure and community values were all considered when defining the boundaries of these zones. The zone boundaries are not intended to be interpreted as hard boundaries with distinct differences between zones, but rather as an implementation guide for defining type and level of fuel modification treatments. Generally, the closer the proximity to the values-at-risk, the higher the priority will be for managing and reducing hazardous fuel levels through fuel treatments, whereas those areas further from values could be managed through Timber Harvest Projects or other land use activities.

Further assessments of fuel abatement priorities at a finer scale will be carried out through community fuel abatement planning and as part of any development in the identified fuel abatement areas.

Within the fuel abatement areas, three zones were identified, each with a set of recommendations from the Fuel Abatement Technical Working Group (Appendix 3 figures 14 &15). These are the Community Zone, the Interface Zone and the Landscape Zone. They are defined in more detail in Section 2.7.1.

One other area for fire risk management consideration is the adjacent Kluane National Park and Reserve. It is shaded as orange with black hatch on the key map (refer Figure 1). This zone identifies areas of priority where Kluane National Park and Reserve will manage for wildland fire. They have committed to make efforts to harmonize their planning and coordinate with the fuel abatement management plans for the adjacent areas.

2.7 Assessment Outcomes

The Integrated Landscape Plan assessment refines the zoning and priorities from the Strategic Forest Management Plan.

2.7.1 Zone Definitions

The new zone and sub-zone classifications are outlined below:

1) Forest Resource Management Zone
(FRMZ, shaded green on maps)
This zone is where Timber Harvest Projects may occur. The areas in this zone have the highest timber volumes, are closest to existing access, and have the highest spruce bark beetle infestation and spruce tree mortality. They generally fall within the Strategic Forest Management Plan planning areas identified as high priority. The primary focus of forest harvesting opportunities will be those stands with greater than 30% mortality by the spruce bark beetle.

Forest Resource Management Sub-Zones

a) High Wildlife Value Areas (FRMZ, green hatched area)
These areas have the potential for higher wildlife value than other areas within the Forest Resource Management Zone. This sub-zone category identifies areas at the landscape scale that are important for multiple wildlife values. The mapping was based on a broad-brush approach, using local knowledge and survey data for moose, bison, caribou, sheep, and fish species. Consideration was given to important wildlife values such as wetlands, creeks and rivers, spatial extent of continuous forest areas, habitat connectivity and corridors, seasonal requirements, important feeding areas, denning/calving/nesting areas, security cover, thermal cover, and waterfowl staging areas.

A more detailed assessment of habitat value will be conducted at the timber harvest project planning and site planning stages.

b) Fuel Abatement Areas

The Fuel Abatement Technical Working Group identified a series of zones surrounding five communities in the CATT. These zones are:

i) Community Zone: Areas closest to communities, including private lots, community green spaces, within community or municipal boundaries. It is in this zone that traditional fuel abatement strategies such as the FireSmart program or fuel treatments by other means can be employed.

Community education and pilot projects should be a priority, as research has shown that the actions of property owners in building construction techniques and fuel management is more effective at reducing wildfires losses than activities at any other scale, including fire suppression.

ii) Interface Zone: Areas located outside the community boundaries that have a strong influence on the potential fire risk due to ember shower transport distances or crown fires advancing to the communities (i.e., generally within 1to 2 kilometers of community boundary.) Traditional fuel abatement strategies may be considered in this zone and evaluated for cost effectiveness. Development in this area, as in the Landscape Zone, should make efforts to acknowledge the potential for fuel management through

iii) Landscape Zone: The Landscape Zone extends beyond the Interface Zone and is generally defined by the distance a forest fire can travel in a day in a worst-case scenario (i.e. up to 12 km.), and considers factors such as prevailing winds and fuel types for a given community.

Fuel modification in the traditional sense cannot be considered practical for many reasons, but integrated resource management and fuel management strategies can be implemented in conjunction with activities already occurring on the landscape. Harvesting or other activities should acknowledge fuel management as a requirement.

Strategic consideration to the size, shape and location of any developments that would enhance fuel discontinuity should be a primary land management focus in this zone Silvicultural principles can be implemented to reduce fire hazard.

2) Provisional Forest Management Zone

(PFMZ, shaded yellow on maps)

This zone may have some high-value timber resources, as within the FRMZ, but the areas in it generally require more access for development. The areas may be considered for planning once an evaluation of the success of FRMZ management is shown and there is a demand. When this Integrated Landscape Plan periodic review is undertaken, some areas may be zoned FRMZ for potential harvest development planning or as CFMZ.

3) Conservation Forest Management Zone

(CFMZ, shaded orange on maps)

This zone has higher wildlife, heritage, or other non-timber values. The areas in this zone are not recommended for harvest development planning. Only low volume (small footprint) forestry activities may occur here (e.g., personal use sawlogs, cabin logs, and fuel wood permits), as the focus is on protecting non-timber values.

2.7.2 Fire Risk and Timber Harvest Project Priority

The SFMP objectives, along with the values and risk assessments under the ILP process, were used to assign timber harvest development priorities for the landscape zones within each planning area. Timber harvesting should be planned according to the following scale of priorities.

Zone		Rank Priority	Priority/Strategy
Forest Resource Management Zone (shaded green on maps)			See sub-zones below.
Sub-Zone	Community Zone	n/a**	**Priority:** Community safety through fuel management and public awareness. **Strategy:** Community Plan to guide the activities used to reduce fire hazards. Fuel treatment activities like the FireSmart program and community awareness to treat properties.
Sub-Zone	Interface Zone	1	**Priority:** Community safety through fuel management and timber harvest integration is the priority in this zone. **Strategy:** Community Plan to guide the activities used to reduce fire hazards. Focus on intensive and extensive management of fuels within 2 kilometers of a community. Traditional fuel abatement strategies may be considered. Timber Harvest Project planning in this area should acknowledge the potential for fuel management through integrated resource management.
Sub-Zone	Landscape Zone (outside High Wildlife Value Areas)	2	**Priority:** Fire hazard reduction through fuel management and integration of other values. **Strategy:** Strategic consideration to the size, shape and location of any Timber Harvest Projects that would enhance fuel discontinuity should be a primary land management focus in this zone. Encourage all Timber Harvest Projects and other activities in this zone to consider fuel management and community safety as priority. Timber Harvest Project planning should be emphasized in areas closer to the designated community (e.g., 2-4 kms) before those areas further away (e.g., 4-12 kms.). Apply THPOG for areas sensitive for wildlife and cultural values.
Sub-Zone	Landscape Zone (inside High Wildlife Value Areas)	3	**Priority:** Fire hazard reduction through fuel management and integration of other values, particularly identified wildlife values. **Strategy:** Strategic consideration to the size, shape and location of any Timber Harvest Projects that would enhance fuel discontinuity should be a primary land management focus in this zone. Encourage all Timber Harvest Projects and other activities in this zone to consider fuel management and community safety as priority. Timber Harvest Project planning should be emphasized in areas closer to the designated community (e.g., 2-4 kms) before those areas further away (e.g., 4-12 kms.). Timber Harvest Projects should emphasize management of wildlife values. Apply THPOG for areas sensitive for wildlife and cultural values.
Forest Resource Management Zone (outside High Wildlife Value area)		4	**Priority:** Harvest planning and development is priority. **Strategy:** Focus Timber Harvest Project activities in stands affected by the spruce bark beetle in higher volume stands (i.e. greater than 75 m^3/ha). Apply THPOG and ILP guidelines for addressing identified values.
Forest Resource Management Zone (inside High Wildlife Value area)		5	**Priority:** Harvest planning and development is priority with extensive management of values to include emphasis on managing wildlife habitat and other non-timber values. Commercial forestry activity associated with the salvage of spruce bark beetle affected stands to be integrated in these areas. **Strategy:** Focus forest harvest activities in; 1) stands with greater than 30% mortality or current spruce bark beetle attack; 2) higher volume stands (i.e., greater than 75 m^3/ha); 3) areas requiring minimal access development. Apply THPOG and specific ILP guidelines for identified values.
Provisional Forest Management Zone (shaded yellow on maps)		n/a**	**Priority:** Areas for possible future planning. **Strategy:** No commercially-based logging to be planned in these areas at this time. Personal use or very small-scale logging (e.g., cabin logs, personal firewood, or provisions in Chapter 17 of CAFN Final Agreement) may occur in this zone.
Conservation Forest Management Zone (shaded orange on maps)		n/a**	**Priority:** Conservation of non-timber related values. **Strategy:** No commercially-based logging to be planned in these areas. Personal use or very small-scale logging (e.g., cabin logs, personal firewood, or provisions in Chapter 17 of CAFN Final Agreement) may occur in this zone.

Table 4 Ranking of Priorities and Strategies for Resource Management Zones and Sub-Zones.

***N/A is areas not for larger scale commercial logging activities. The zones are presented in Figure 3 to illustrate the relative positions of the priority zones.*

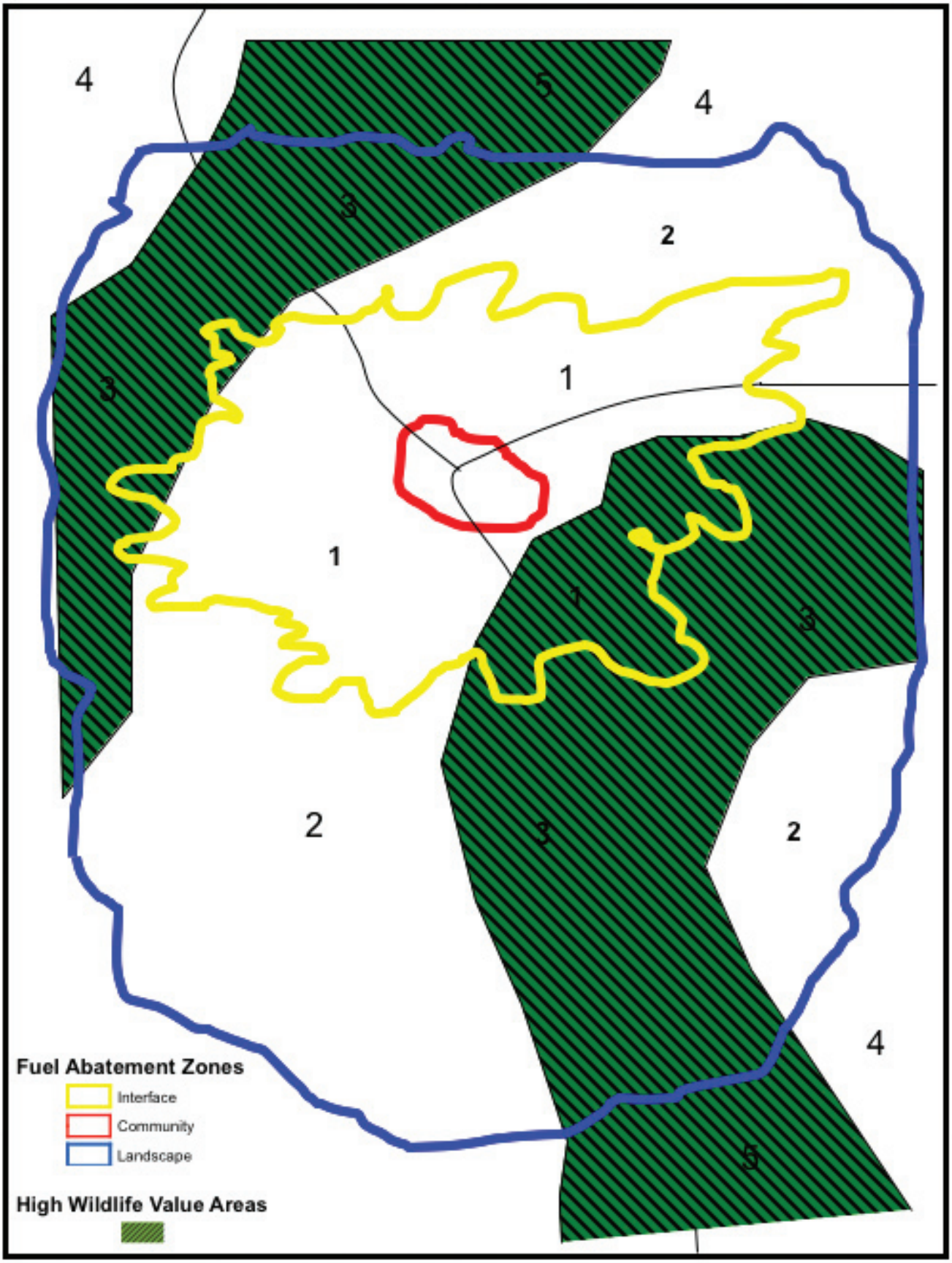


Figure 3. Schematic Forest Harvest Priority Map

3. LANDSCAPE PLANNING GUIDELINES

The guidelines are provided to assist Timber Harvest Project planners in achieving the objectives from the Strategic Forest Management Plan and Implementation Agreement.

The guidelines are to be applied for all forest harvesting and forest planning activities within the Champagne and Aishihik Traditional Territory.

The Timber Harvest Planning and Operating Guidebook (THPOG) (1999) should also be consulted for guiding Timber Harvest Projects and forest operations in the Champagne and Aishihik Traditional Territory.

3.1 Resource Management Guidelines for Timber Harvest Projects

(formerly called Harvest Development Plans).

(1) Ten Year Timber Harvest Project Area Plan

This plan is required to identify candidate Timber Harvest Projects areas, determine the sequence of development and permitting requirements. This plan will be implemented within the scope of the harvest level agreed to by the Yukon and CAFN governments in March 2006, which was a wood volume of one million cubic meters over a ten year period.

The outcome of this plan will ensure that a stable timber supply is made available to the communities and forest based industries. This plan will also ensure that community, wildfire, safety concerns are incorporated into the timber supply plan for the CATT.

The planning exercise incorporates landscape level values and wildlife issue identified in the development of this Integrated Landscape Plan. The land base managers (YG, CAFN, and Parks Canada) have provided expertise and made available all known information that will help deal with cumulative effects, ecological integrity, access management, and forest renewal.

(2) Timber Harvest Projects and associated harvest blocks

The forest harvesting priorities, as described in section 2.7.2, are primarily focused on the salvage of spruce bark beetle-affected stands with greater than 30% mortality.

Harvest blocks should have the size and shape of their boundaries designed with an attempt to emulate the natural disturbance patterns of the area. Harvest block boundaries should attempt to follow natural features such as timber types, geographical breaks, and riparian features. The size of the harvest blocks can vary between 1 and 200 hectares.

Retention strategies for harvest blocks, inside high wildlife areas will be targeted at an average of 25% of the stem count or volume, as deemed most appropriate. The retention strategy should specify the type, amount and spatial configuration of the structure to be retained. The retention can be in groups of mature trees or in single trees. Where wind throw risk is high, group retention may be prescribed.

As the dead and dying forest is opened up through timber harvesting, experience has shown that instances of significant blow-down of timber may occur, therefore engineering and configuration of cut-blocks must consider wind-firmness as one of the forest development plan objectives.

Where significant blow-down events occur in standing timber, efforts will be made to salvage and utilize the blown-down timber. In all such instances, the first priority shall be to protection of riparian values and water quality.

Joint field inspections by Champagne and Aishihik First Nations, Yukon Forest Management Branch and Yukon Department of Environment resource managers are recommended to devise the salvage strategies appropriate to individual specific site locations.

(3) Season and Timing of Harvest

The season of harvest for any area will be determined primarily by the access constraints, soil characteristics, and other considerations such as wildlife concerns or recreation values. Most harvesting is expected to occur in the winter months. Operating on frozen ground limits site disturbance and makes access less costly.

Some summer harvesting may be planned to maintain employment opportunities in areas that can be accessed and harvested within site-disturbance guidelines set out in the THPOG, and can accommodate other values, particularly wildlife and tourism/ recreation values.

The timing of harvest within a season will be influenced by site specific wildlife concerns (e.g., calving season), or other land use activities (e.g., tourism use, recreational use, cultural use). These issues will be mitigated for in the development of harvesting plans.

3.2 Silviculture Guidelines

A silvicultural system is defined as one or more planned series of treatments which sees a stand through at least one complete rotation (life span) including harvesting, regeneration, and establishment of conifer trees above competing vegetation. These systems should be chosen based on site characteristics and stand management objectives.

Each area to be harvested must be reviewed prior to harvest to assess its site characteristics and determine the most appropriate course of action to meet management objectives. A silvicultural system may then be prescribed which will include a harvesting system and a regeneration strategy.

In an attempt to emulate natural disturbance patterns, the prescribed silvicultural system should consider the current stand structure characteristics when prescribing a harvesting system. Any retention strategy should specify the type, amount, and spatial configuration of the stand to be retained. A mix of single tree and group retention strategies should be considered.

Natural regeneration is the preferred method of regenerating. Harvesting systems should be prescribed to adhere to this by protecting advanced regeneration or by promoting the growth of new regeneration. Forest regeneration strategies should be focused on developing resilience to future large scale insect outbreaks, and/or large landscape fires. This should be achieved through encouraging a variety of harvest and silvicultural practices (e.g., aspen or mixed wood regeneration, broadening of the age-class distribution, variation in the spatial distribution of harvest stands, etc.).

Most harvested areas should be established to a free-growing state within 15 years. In special areas, it may be considered desirable, for wildlife habitat management purposes or other reasons, to allow for a longer "green-up" period.

A Site and Harvest Plan will summarize the actions to be taken within a specific harvest block. It includes information such as site characteristics, management objectives, and treatment targets. A Site and Harvest Plan should be developed and submitted with each individual harvesting block contained within a Timber Harvest Project proposal.

3.3 Land Use Coordination Guidelines

Most land uses accommodate more than one use at one time. Some allow different uses at different times, if coordinated through scheduling, to meet the interests of the respective users.

All Timber Harvest Projects developed under the direction of the Strategic Forest Management Plan and the Integrated Landscape Plan will include the identification and assessment of all known interests and values in the project area and will work to mitigate concerns raised during the project development and Yukon Environmental and Socioeconomic Assessment Act screening process requirements, prior to any timber harvesting permits being issued. Some of these known interests in the region are local ski trails, management plans with site-specific interests, camp locations, cultural features, and research and monitoring trials.

3.4 Fire Risk and Fuel Abatement Guidelines

Fire risk abatement is a multifaceted program that involves the public, local resource users, and governments. Each user can have a significant impact on the success of reducing the risk of wildfire and associated damages to people and important values.

Activities and potential tools for managing and manipulating fuels to reduce the fire hazard to communities include timber harvesting, fuel abatement or modification treatments (as seen in FireSmart program), coordination and information exchange with community emergency measures and planning groups, volunteer and government fire suppression groups, and most importantly public education. Successful implementation will require the involvement of individuals in affected communities, and the integration and coordination of several different agencies (e.g., federal, municipal, Yukon and CAFN governments and the Kluane National Park and Reserve), responsible for the many facets of this complex issue.

3.4.1 Fire Risk Abatement Guidelines

The Community Fuel Abatement Plans developed under the direction of the SFMP deal only with community fuel abatement (modification / reduction) strategies within the designated zones. The goal is to have communities work with governments to implement treatments as prescribed and use the information as a tool to improve community emergency response plans.

These guidelines include:

(1) Community Fuel Abatement Plans should be completed for each community in the CATT. These plans are to be provided to the communities for their use. Fuel abatement areas should be monitored and evaluated for effectiveness as necessary,

(2) A plan for fuel management and post-forest operations fuels assessment of harvested areas should be included in Timber Harvest Projects within the fuel abatement zones. Timber Harvest Projects should include a silviculture strategy which emphasizes the development of stand types with lower fire hazard fuel types (e.g., regeneration of Aspen or other fire resistant fuel types).

(3) Public awareness of wildfire risk to communities in the CATT must be maintained through multi-agency presentations and continuing pilot projects to demonstrate risk reduction approaches and methods, especially those that involve personal responsibility for fuels on private land.

3.4.2 Fuel Abatement Guidelines

The Fuel Abatement Technical Working Group (FATWG) has developed fuel abatement guidelines to guide the prescriptions in fuel abatement or FireSmart areas (while the following are used as guidelines, it is understood that there will also be site specific and community factors).

(1) To reduce canopy cover to an acceptable level, so that crown fire potential is significantly reduced;

(2) To reduce fuels at or near the forest floor to levels that reduce surface fire intensity and interrupt vertical fuel continuity with the forest canopy;

(3) To encourage development of a stand that is less susceptible to attack from the spruce bark beetle; and

(4) To retain a stand structure and composition that will respect values for wildlife, ecosystem function, aesthetic and cultural aspects as much as possible without compromising community safety.

3.5 Forest Ecosystems, Wildlife, and Biological Diversity Guidelines

One of the goals of the Strategic Forest Management Plan is to maintain functioning forest ecosystems. The goal states:

"Maintain the function and integrity of forest ecosystems by conserving forest productivity and biodiversity and related waters, soils, ecosystems and landscapes. This goal focuses on maintaining the health and vitality of the forest and the web of living and nonliving things that are part of it… Change and disturbance are a vital part of forest ecosystems. A healthy forest is a productive forest with constant new growth of trees, other plants and animals."

The guidelines for achieving this goal are:

1. Ensure no more than 50 % of the forested area of each Eco-Region and Eco-District (Appendix 3, figure 7) is harvested.

2. Ensure no single forest site class type is disproportionately harvested within the CATT during the Integrated Landscape Plan timeframe. Representation may be within any of the planning zones, and may include those areas set aside as riparian buffers, wildlife corridors, wildlife tree patches, etc. during harvest development planning.

3. Ensure silviculture systems for each block include a variety of harvest/regeneration strategies to minimize impact on wildlife habitat. High wildlife areas should average 25% retention of stand structure. The range of retention can be 10-30% stand structure depending on site characteristics. The retention objective can be met with individual trees or patches of trees retained in the harvest plan. Harvest block site plans should demonstrate a variety of retention strategies rather than applying the same prescription everywhere.

4. Provide appropriate wildlife movement corridors between important habitats and key landscape features. The network of connected, un-harvested areas should focus on riparian management areas. Selection of these areas should be made on a landscape scale as part of the next stage of planning (i.e.10 Year Timber Harvest Project Plan) in consultation with those agencies with a mandate to manage wildlife and wildlife habitat in the region. The network should connect to the Kluane National Park and Reserve and the Provisional and Conservation Forest Management Zones.

5. Planning sessions with wildlife experts/managers should be part of the Timber Harvest Project development phase, and should include management strategies for focal species with associated site prescriptions. Species selection and additional guidelines will be part of this phase of planning.

6. Ensure coarse woody debris is incorporated in stand structure retention.

7. Maintain quantity and quality of water by following THPOG forest management strategies for access construction and riparian areas.

8. Protect any rare or sensitive features identified in the Champagne and Aishihik Traditional Territory as outlined in the THPOG. This may include providing reserve tree patches or abandoning harvest operations in the identified area.

9. Ensure species that occur in the forested areas of the CATT and identified as "Species at Risk" under the Species at Risk Act (Canada) and those species protected under other legislation (i.e., Yukon Wildlife Act), are protected through any of the related forest management activities. These species are presently; Wood Bison, Woodland Caribou, Trumpeter Swan, Grizzly Bear, Wolverine, Squanga Whitefish, Mule Deer, Elk, and Cougar.

10. Consider areas identified in other assessments, such as special management areas, environmentally significant areas, or Important Waterfowl Areas (Yukon Wetlands Technical Committee) for special harvesting management requirements and/or protection.

11. Harvesting of fire-killed trees should follow the same guidelines for beetle-killed trees. Some post-fire forest is critically important for several species and may require a significant portion to be reserved from salvage harvest activities.

3.6 Watershed and Riparian Management Guidelines

The amount of forest harvesting in a watershed will affect water flow volume and timing. There are general guidelines to estimate that change from studies done in other jurisdictions.

The Landscape Units (also referred to as SFMP Planning Areas) are established using watershed boundaries in most cases. The amount of water flow change depends on the

current forest cover, the topography and the precipitation in the watershed. Since most harvesting proposals will be designed to leave some advanced regeneration, the impact will not be the same as it would be if all harvesting was clear-cut. In general, watershed hydrology and characteristics of aquatic ecosystems in the region are poorly understood, especially with respect to the possible impacts of the spruce bark beetle. The Watershed Assessment Procedures Guidebook (BC Ministry of Forests 2001) provides a useful guide to estimate the hydrologic recovery expected from the regeneration of disturbed sites (i.e., delay of recovery based on area disturbed, density of regeneration, and height).

Landscape areas where more than 20% of the watershed is proposed for harvest should be assessed for unacceptable changes in water quality and quantity. The assessment should follow the steps set out for a Level 1 assessment as outlined in the B.C. Ministry of Forest's Watershed Assessment Procedures Guidebook.

The THPOG riparian area guidelines should be followed for operations near streams and wetlands. Each stream should be classified by field assessment during the Timber Harvest Project phase.

Any forest harvesting in the riparian management zone should be reviewed with those agencies with a mandate to manage wildlife and wildlife habitat in the region in the Timber Harvest Project development stage. Wetland areas noted as particularly valuable by the Resource Assessment - Wildlife Working Group should be managed to protect the values identified for these areas.

It should be assumed that all water bodies in the CATT are fish-bearing, unless there is detailed information documenting the absence of fish or suitable fish habitat.

3.7 Recreation, Tourism, and Viewscapes Guidelines

All forest harvesting activity and planning should consider a broad range of interests of recreational users and tourism-related values.

Areas within CATT have been identified through peer review input and community consultation as areas of special interest for recreational and/or tourism values. Many sites were recognized in the resource assessment classification process and were designated within the Provisional and Conservation Forest Management Zones.

Those sites identified that are in the Forest Resource Management Zone and are considered important for recreational purposes include;

Water-based sites: Dezadeash River and Lake, Kathleen River, Kathleen Lake, Kloo Lake, Kluane Lake, Pine Lake, and Takhini River.

Land-based sites: Portions of traditional trails as identified in the Champagne and Aishihik First Nations Final Agreement, Alsek Valley, Bear Creek Summit, Quill Creek area, sections of the Alaska Highway and Haines Road with emphasis at highway stops and viewpoints, Aishihik Road, Haines Junction, portions of old and new Alaska Highway, and Silver City.

Guidelines for operations within Recreation, Tourism, and Viewscape areas should include:

1. Timber Harvest Project plans should be designed to minimize the area of view changed or the intensity of what appears to be abrupt changes within major highway viewscapes, unless it is determined that forest harvesting may "improve" the viewscapes of the area. A good reference is the B.C. Ministry of Forests, Visual Impact Assessment Guidebook,

- Irregular patterns and shapes of forest stands, rather than straight edges and corners.
- A considerable amount of residual material to provide a green look to the harvested stand. These practices could include retention strategies, retention of deciduous and understory components, and feathered harvest edges.

2. Existing access to frequently used recreational sites should be maintained at its current state where forest harvesting occurs.

3. THPOG provides additional considerations for timber harvesting projects.

4. All local commercial tourism operators should be contacted and provided sufficient time to provide feedback on harvest development plans. Once plans are approved, they should be notified in advance of seasonal start-up times.

3.8 Heritage and Culture Guidelines

The objective is to protect all known or newly identified sites deemed highly valuable for Champagne and Aishihik First Nations and Yukon Government culture and heritage purposes, respecting that the two governments have slightly different approaches in these matters. The following guidelines will assist that goal:

1. Champagne and Aishihik First Nations heritage and culture resource site locations will not be provided at the landscape level of forest planning due to: (a) confidentiality of locational data; (b) recognized bias of inventories of known sites in terms of their geographic coverage (sites are only known where they have been looked for); and (c) inherent limitations of the predictive modeling exercises that have been conducted to date.

2. Once areas have been selected for harvesting, consideration for heritage and culture issues must become part of the planning process. This includes a pre-harvest field assessment of cultural and heritage values in snow and frost-free conditions by qualified personnel on behalf of Champagne and Aishihik First Nations Heritage and Yukon Government Heritage. This should be coordinated by forest planners in order to allow sufficient time in advance of harvesting operations for the heritage assessment to be completed.

3. Identified heritage sites must be protected, with no logging allowed in the immediate site area (THPOG, 1999). Winter logging on snow-covered ground may be permitted if the site(s) of concern consist solely of sub-surface archaeological deposits. The application of this approach depends on site sensitivity and vulnerability, and must be based on input from Champagne and Aishihik First Nations Heritage and Yukon Government Heritage on a site-by-site basis.

4. If new site(s) are discovered during harvesting or access development work, the specific area of concern must be excluded from operations until a detailed assessment is conducted by Champagne and Aishihik First Nations Heritage and Yukon Government Heritage. Amended operational plans will provide mitigative measures for continued work in the area.

5. As a research and monitoring requirement under the Strategic Forest Management Plan, post-harvest heritage assessment work should be done to refine the above guidelines as needed as well as to improve our knowledge of heritage resource locations for future predictive modeling.

3.9 Hunting and Trapping Guidelines

The Strategic Forest Management Plan states that harvest planning respect the rights and interests of trappers and outfitters and, where appropriate, support their revenue-generating opportunities throughout the CATT planning region. It also states that the harvest plans should protect a sustainable domestic harvest of wood, meat, fish, berries, and other non-timber products.

The ILP provides these guidelines to achieve that goal:

1. Traditional hunting and/or trapping areas for each trapper and outfitter should be referenced by harvest planners. Champagne and Aishihik First Nations and the Yukon Government will provide these maps, ensuring that confidentiality requirements are met.

2. Timber Harvest Project planners must consult with trappers and outfitters in the area as part of the project planning process.

3. Trappers must be notified in advance of the start of operations to avoid damage to their traps.

4. Maintain existing access to trapping and hunting areas.

5. Manage for suitable habitat of important game and fur-bearing species.

3.10 Access Management Guidelines

An access plan must be drafted with the Timber Harvest Project proposal to assist integration of operations with other resource users.

These guidelines will assist in achieving that goal:

1. The access management plan shall include:
    a. Proposed location of new and existing main haul roads
    b. Timing of construction
    c. Road classification
    d. Road availability (summer, winter only, or periods of closure)
    e. Road maintenance
    f. Road deactivation or closure
2. Integrate access development plans with other resource users to minimize new road developments.
3. Apply THPOG guidelines for "Access management and infrastructure" and consider other applications/strategies for reducing impact of roads on soils, wildlife and hydrologic processes as outlined in the B.C. Ministry of Forests (2002) Forest Road Engineering Guidebook.
4. New road developments or access improvements should be rehabilitated as prescribed in the Timber Harvesting Project as soon as possible after the harvesting and reforestation operations have been completed.
5. Use winter access (i.e., frozen soils and with adequate snow pack) as much as possible in highly sensitive areas.
6. Minimize the total area affected by skid trails in the harvest blocks to 7% of the total block area, when possible. Where this level is exceeded, harvest plans should include rehabilitation strategies to restore soils to former structural characteristics.
7. Limit line of sight when possible, to no more than 400 meters along main roadways.
8. Mainline access routes should provide a visual buffer between road and interior of block.
9. In the absence of information on the potential impacts on forestry road development on wildlife, forestry planning should consider the access density thresholds from Kluane National Park Grizzly Bear Management Recommendations. Threshold are 0.16km/km^2 (e.g. Planning Area level), or a localized density 0.40 km/km^2 (e.g., Operating Unit level). (See Table 3 for current estimate of road density in some of the Landscape Units).

3.11 Research and Monitoring Guidelines

The development of the Integrated Landscape Plan is based on a precautionary approach that emphasizes the application of risk assessment for management decisions in order to avoid undesirable and irreversible outcomes.

An adaptive management program will be developed and facilitated by the Forestry Working Group within one year of the commencement of forest operations. Scientific, forest industry, and local community members will participate in the measuring and developing responses to the forest management activities and other resource activities.

Once monitoring procedures are developed, proponents will be requested to establish monitoring and reporting procedures, and to prepare annual reports on their operational activities.

3.12 Timber Harvest Project Referral and Approval Processes

If the Champagne and Aishihik First Nations and Yukon governments become the proponents of Timber Harvest Projects, then this will ensure they are developed under the guidance of the *Strategic Forest Management Plan and Integrated Landscape Plan*.

All other proponents should be referred to Champagne and Aishihik First Nations and Yukon government resource managers, who will work with proponents to ensure that all projects are aligned with the Strategic Forest Management Plan, Integrated Landscape Plan, and THOPG prior to project submission to the Yukon Environment and Socio-Economic Assessment review process.

Proposals for timber harvest volumes of more than 1000 m3 but less than 20,000 m3 are reviewed under the Yukon Environment and Socio-Economic Assessment Act (YESAA) by the Designated Office (DO) in Haines Junction. Proposals for more than 20,000m^3 are assessed by the YESAB. The Energy, Mines, and Resources Assessment Regulatory Guide describes the procedure to be followed.

The DO assessment process may take up to 2 months from the time of application to the office. The YESAB assessment process may take up to 1 year. Harvesting proponents are advised to familiarize themselves with the YESAA process and be prepared well in advance of operations.

Proponents will be responsible for incorporating the YESAA decision document requirements into their Timber Harvest Projects prior to the issuance of timber permits.

4.1 Working Group Structures for Developing the Integrated Landscape Plan

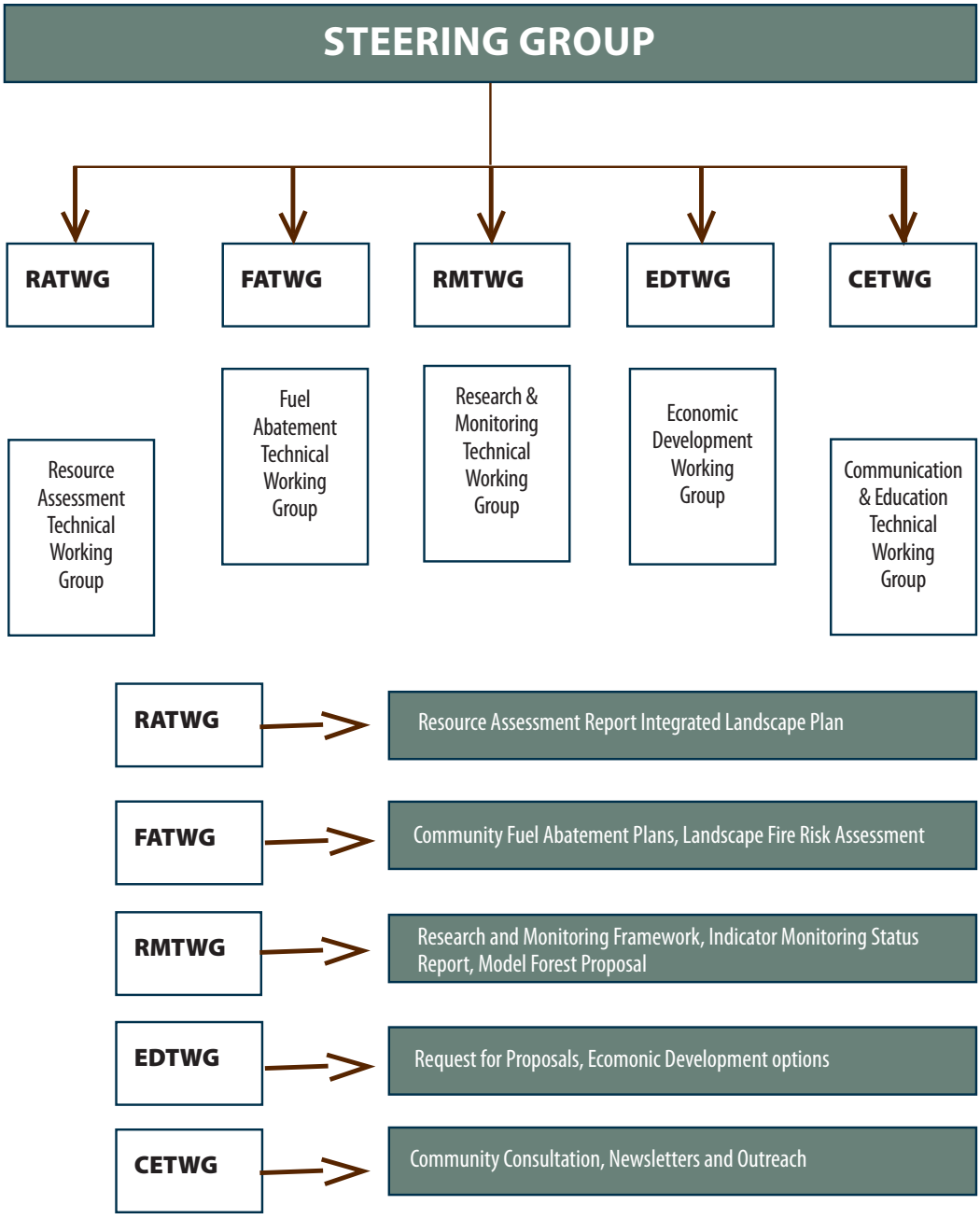
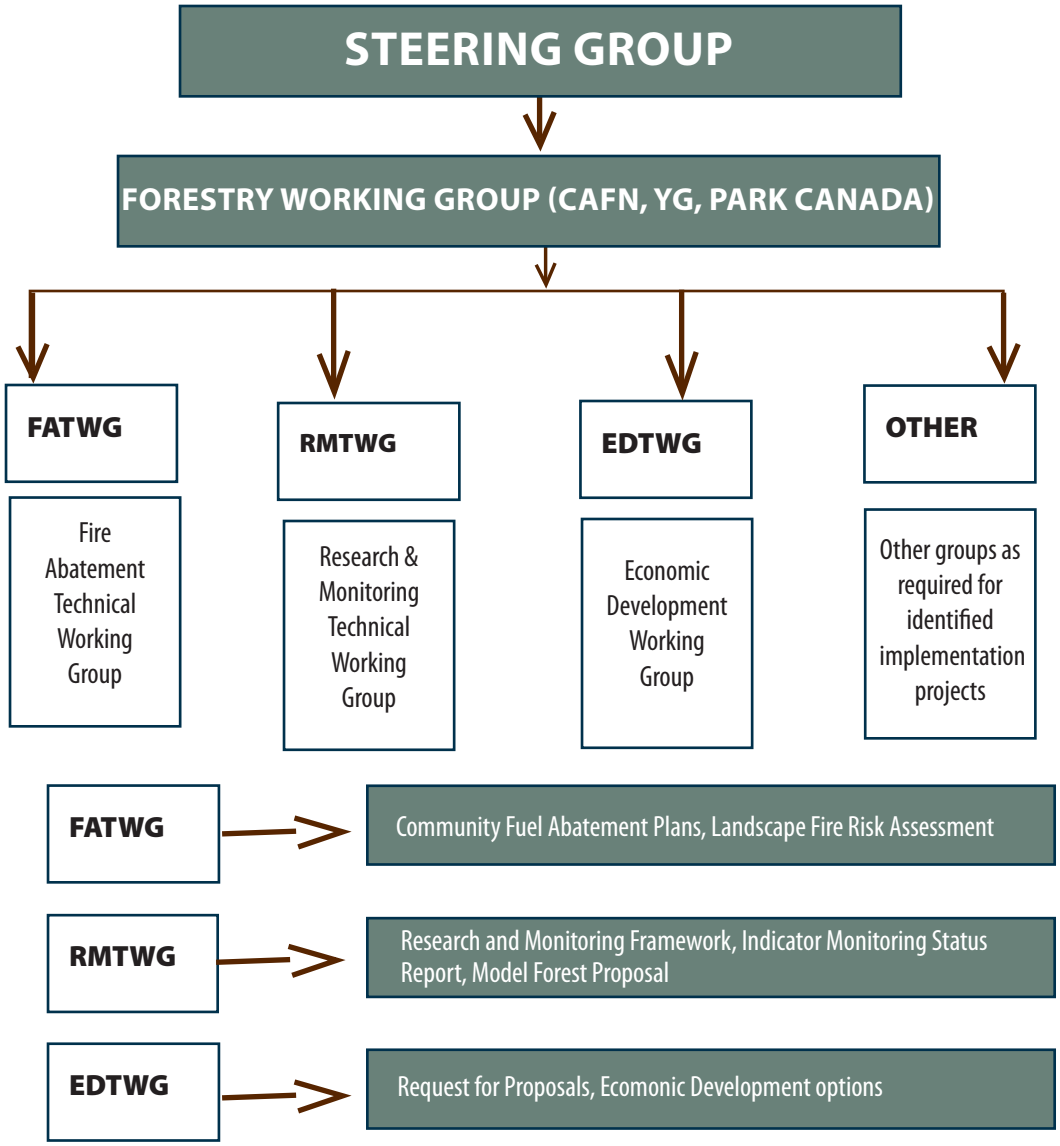


Figure 4: Framework of the Working Group Structure as defined in the Terms of Reference developed in 2004.

4. APPENDIX 1


STEERING GROUP
FORESTRY WORKING GROUP (CAFN, YG, PARK CANADA)
FATWG
RMTWG
EDTWG
OTHER
Fire Abatement Technical Working Group
Research & Monitoring Technical Working Group
Economic Development Working Group
Other groups as required for identified implementation projects
FATWG
Community Fuel Abatement Plans, Landscape Fire Risk Assessment
RMTWG
Research and Monitoring Framework, Indicator Monitoring Status Report, Model Forest Proposal
EDTWG
Request for Proposals, Ecomonic Development options


EXIT

5.1 Community Consultation

Consultation sessions have been conducted in the Traditional Territory for several years. All consultation sessions in 2005 were designed to share and gather information from several communities to lead toward the development of the Integrated Landscape Plan. These sessions were facilitated by the Alsek Renewable Resources Council. For more information, please contact the ARRC office.

- Spring 2005: Public meetings held in Haines Junction, Champagne, Silver City, Whitehorse, and Mendenhall.
- Fall 2005: Public meetings held in Haines Junction, Silver City, Champagne, and Whitehorse.
- Public responses received following public consultation.

5.2 Champagne and Aishihik First Nations Forestry Workshop

- April 8-10, 2005: Traditional Knowledge workshop. This was an information-gathering exercise, including an assessment of values and priorities.

5.3 Databases

A wide range of data sets have been employed for the assessment of broad resource values and forest conditions in the Champagne and Aishihik Traditional Territory (see maps). For further information on these sources, please refer to document contacts.

Many of the terms in the document can be found in the "Yukon Glossary of Forest Terminology"

5.4 Yukon and Regional Reports, Plans, Proceedings and/or Assessments

(Those in **bold** related specifically relate to the Champagne and Aishihik Traditional Territory).

5.4.1 Plans Used to Assist the Integrated Landscape Plan

1. Strategic Forest Management Plan (2004)

2. Draft Integrated Landscape Plan for the Champagne and Aishihik Traditional Territory, (March 2006).

3. Kluane National Park and Reserve Management Plan (2004)

4. Kluane Region Tourism Plan (YG) (2000)

5. Aishihik Integrated Wildlife Management Plan (2000)

6. Bison Management Plan (1998)

7. Alsek Moose Management Plan (1997)

8. Draft Kluane Land Use Plan (1998 Update)

5.4.2 Selected Reports and Assessments to Assist the ILP

9. RATWG, Draft Resource Assessment Report, (May, 2005).

10. RATWG, Draft Resource Assessment by Planning Area, (May, 2005).

11. JC Environmental Consulting and Cambio Consulting, Wildland Fire Review Panel, Public Review Summary - Final Report, (2005).

12. Ember Research Services Ltd., Fuels classification and fire climatology for Whitehorse, Watson Lake and Haines Junction, Yukon, (1998).

13. Ember Research Services Ltd., Yukon Community Wildfire risk and reduction assessment, Final Report, (2000).

14. Parks Canada, Grizzly Bear Management Recommendations for the Greater Kluane Ecosystem and Kluane National Park and Reserve, (1998)

15. Yukon Government, A Discussion Paper, Towards a Forest Policy Framework for the Yukon, (2004).

16. Workshop proceedings from the Yukon Forest Strategy initiative (various documents).

17. Yukon Government, Forest Management Branch, Timber Harvest Planning and Operating Guidebook,(1999).

18. Canadian Forest Service and Yukon Government, Forest Health Report, (2004).

19. E. Berg, D Henry, The history of spruce bark beetle outbreaks in the Kluane region as determined by dendrochronolgy of selected forest stands, (2003).

20. DIAND and Axys Environmental Consulting, Options for Implementation of a Yukon wildlife threshold pilot program: A scoping level review, (2002).

21. DIAND, Forest Resoures, Timber Supply Analysis Southern Yukon, (2000).

22. Yukon Government, Department of Tourism and Culture, Yukon Tourism and Culture, Handbook for the identification of heritage sites and features, (2005)

23. B.C. Ministry of Forests, 2001. Watershed assessment procedure guidebook. 2nd ed., Version 2.1. Forest Practices Code of British Columbia Guidebook, (2001).

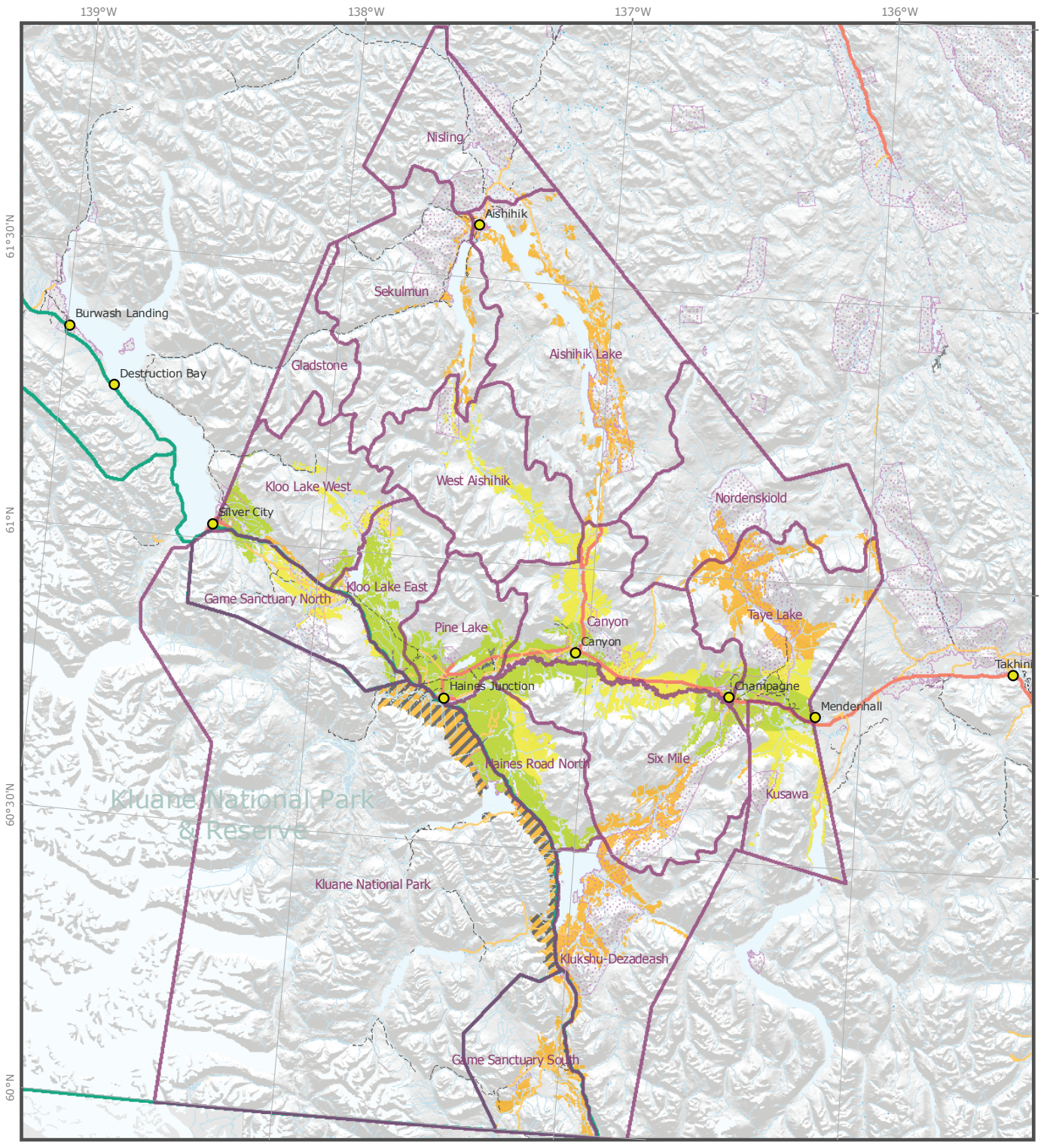


Figure 6:
SFMP Landscape Units & Resource Management Zones

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan:2006

6. APPENDIX 3 MAPS

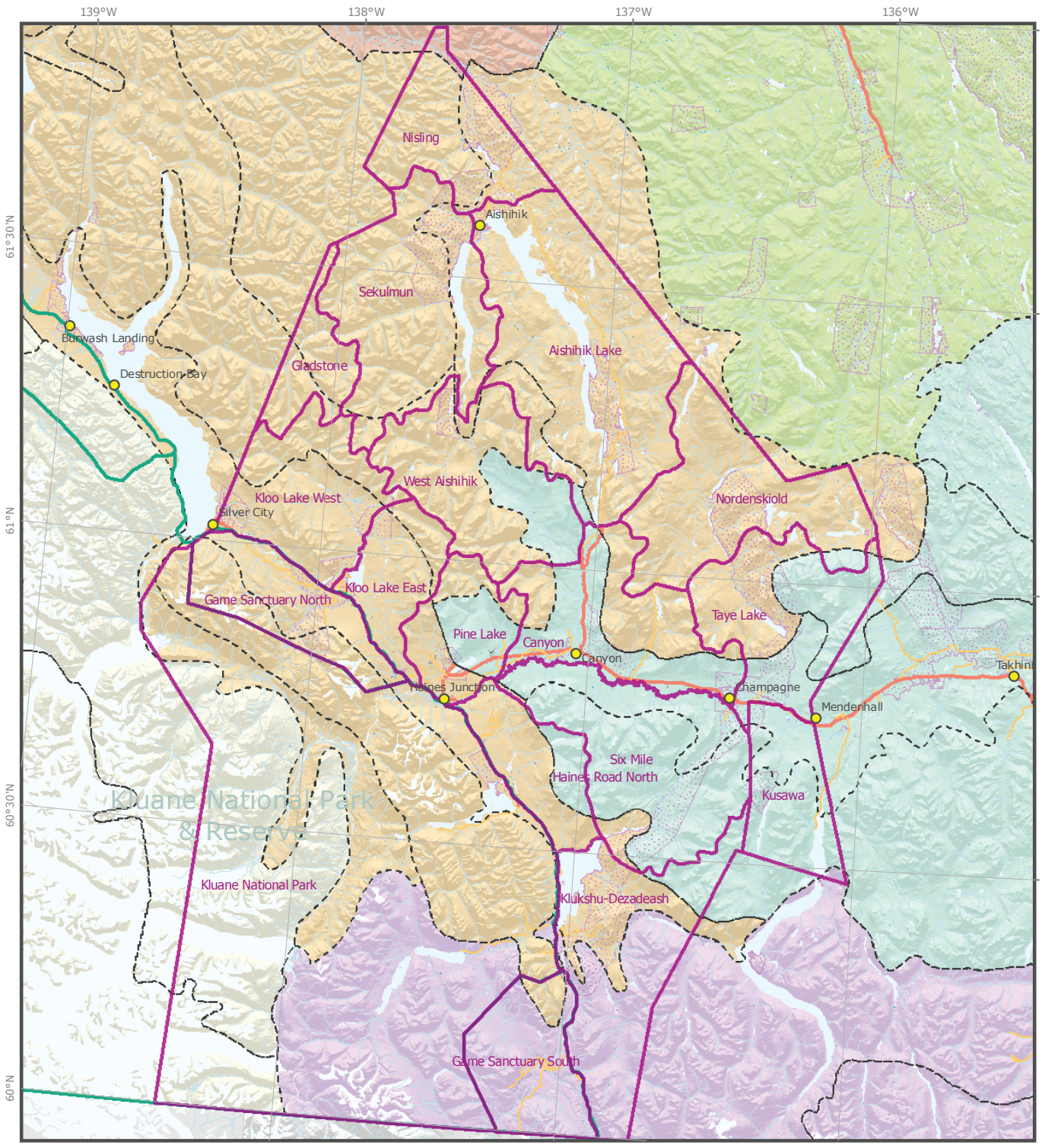


Figure 7:
CATT Ecoregions and Ecodistricts

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

0 12.5 25 50
Kilometers

Albers Equal Area Projection

Communities
Kluane National Park & Reserve
SFMP Landscape Units
CAFN Settlement Lands

Ecodistrict Boundaries
Ecoregion Boundaries
Klondike Plateau
Ruby Ranges
Saint Elias Mountains
Yukon Plateau-Central
Yukon Southern Lakes
Yukon-Stikine Highlands

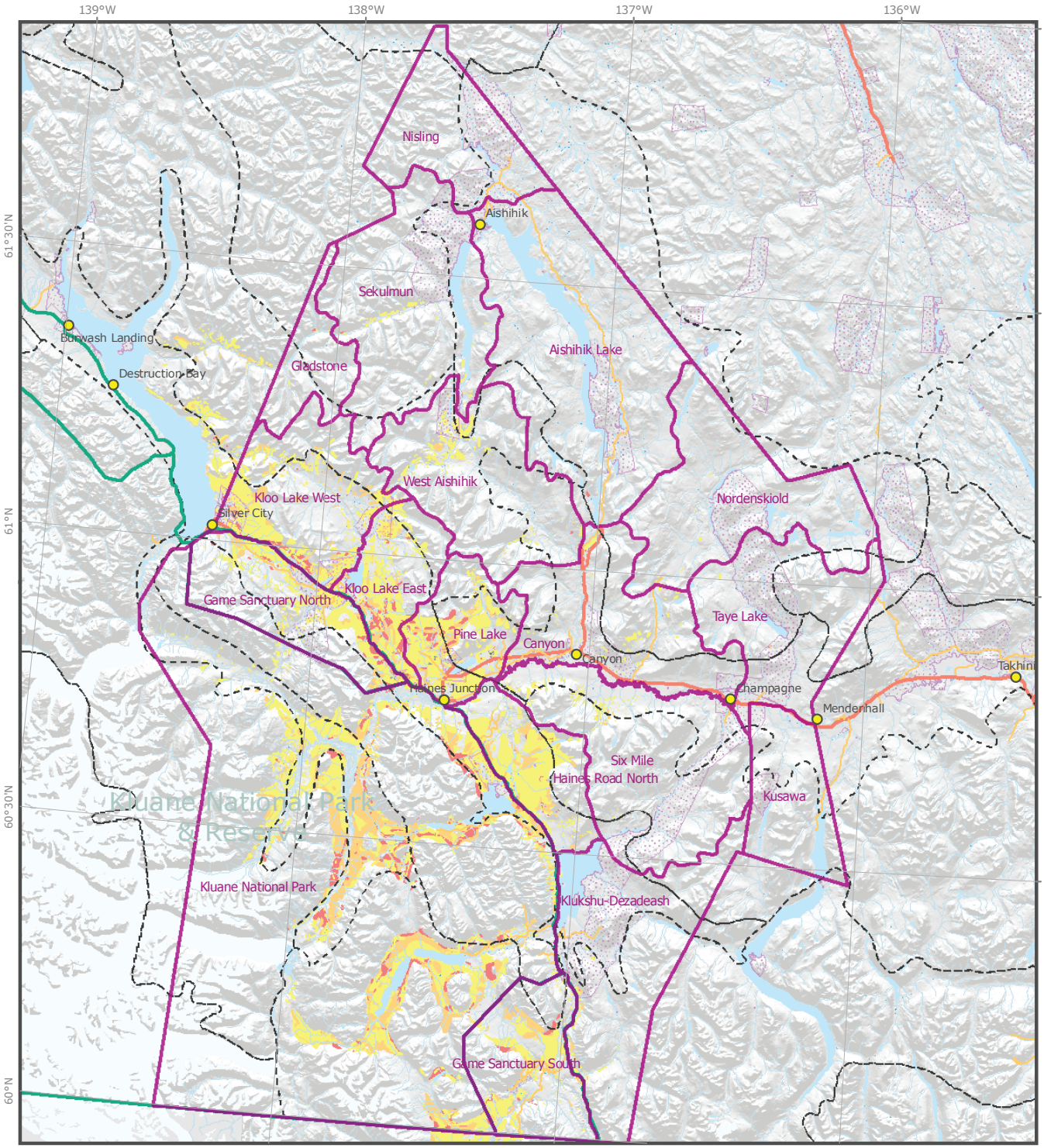


Figure 8:
Spruce Bark Beetle Infestation Overview

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

0 12.5 25 50
Kilometers

Albers Equal Area Projection

6. APPENDIX 3 MAPS

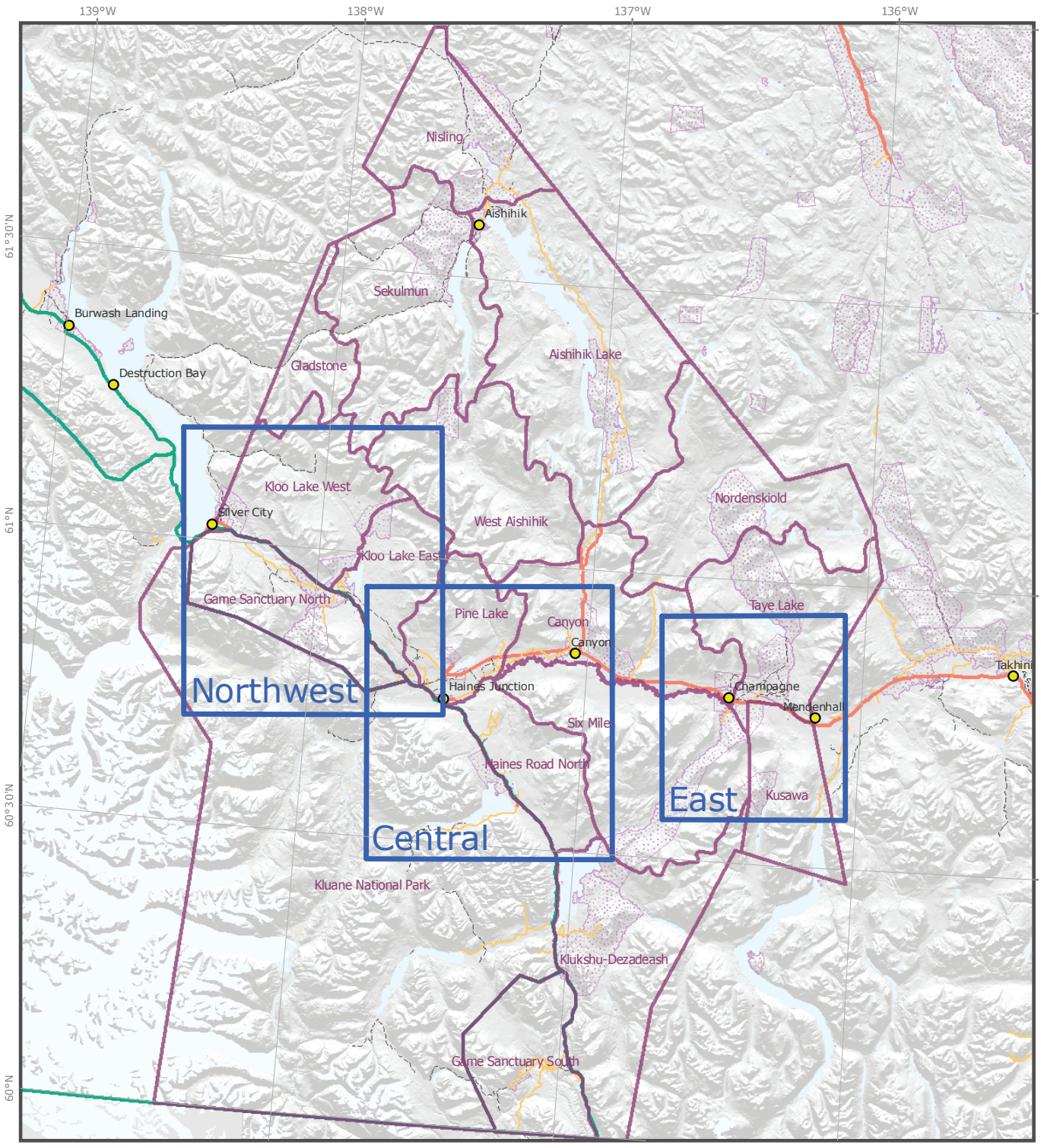


Figure 9:
Location and Extents of Regional Maps

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

0 12.5 25 50
Kilometers

Albers Equal Area Projection

- Communities
- Road
- Limited-use road
- Trail
- Cut line
- Logging Roads

- Extent of Regional Maps
- Kluane National Park & Reserve
- SFMP Landscape Units
- CAFN Settlement Lands

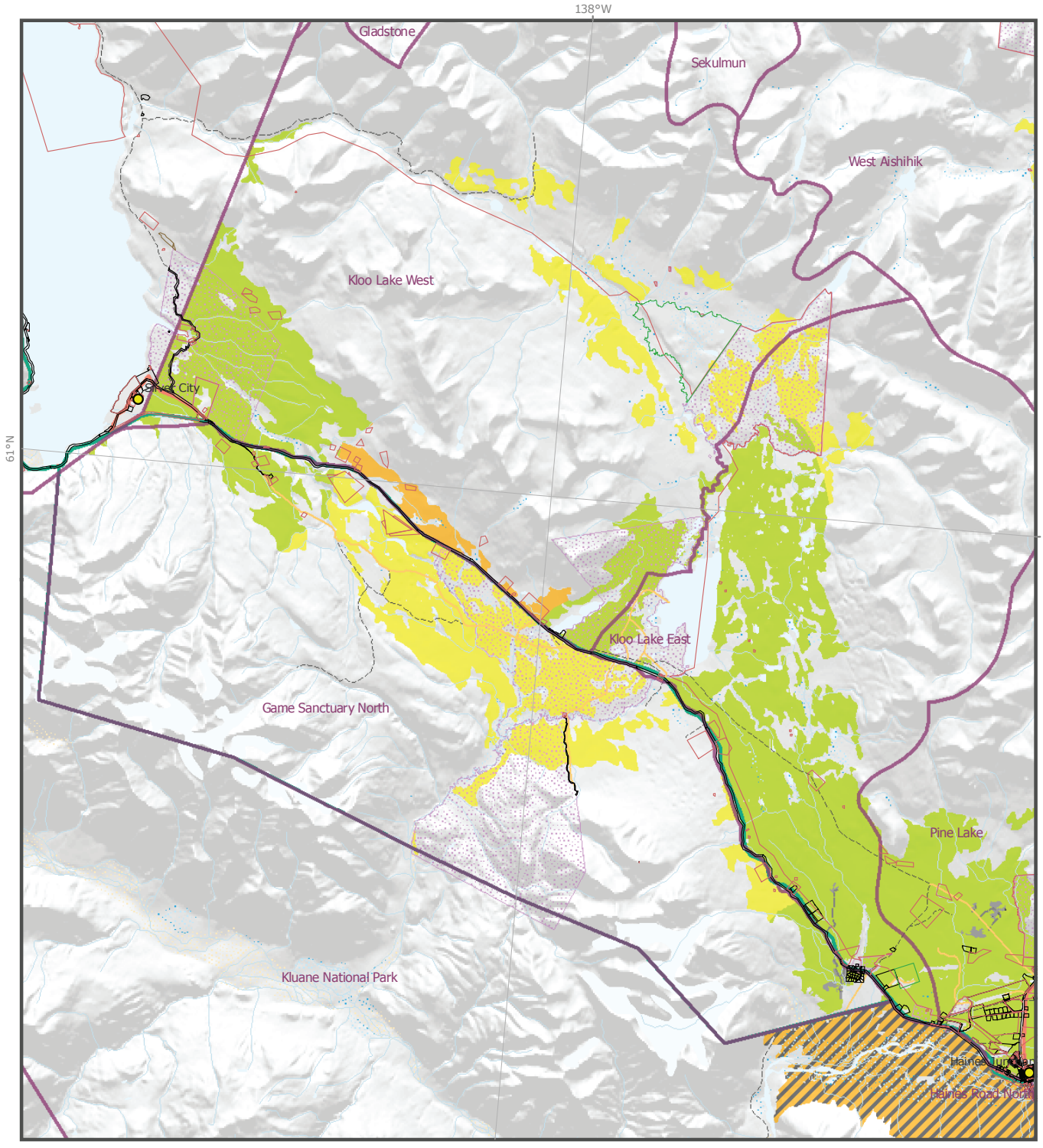


Figure 10:
Land Designations & SFMP Landscape Units (Northwest)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

6. APPENDIX 3 MAPS

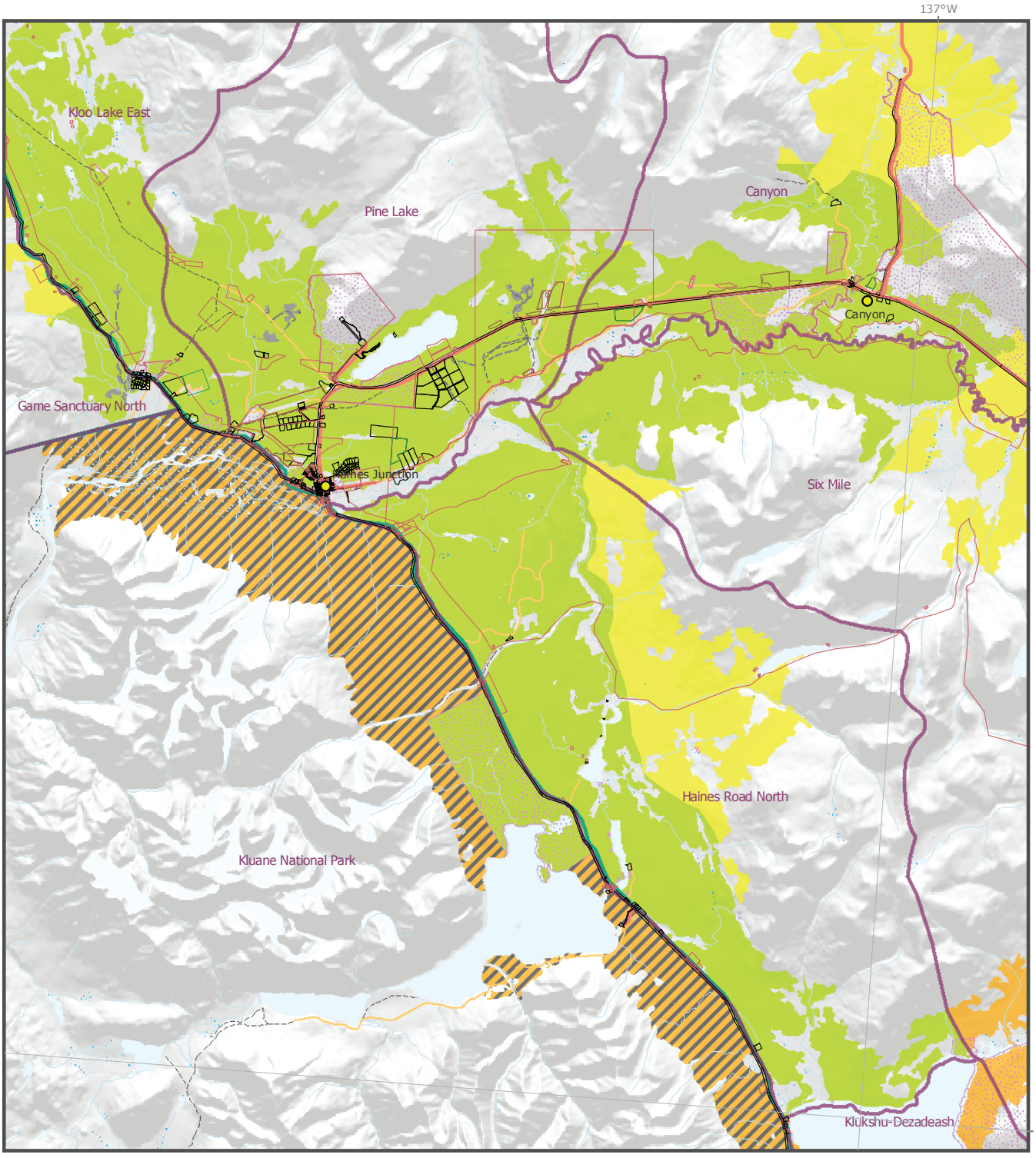


Figure 11:
Land Designations & SFMP Landscape Units (Central)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

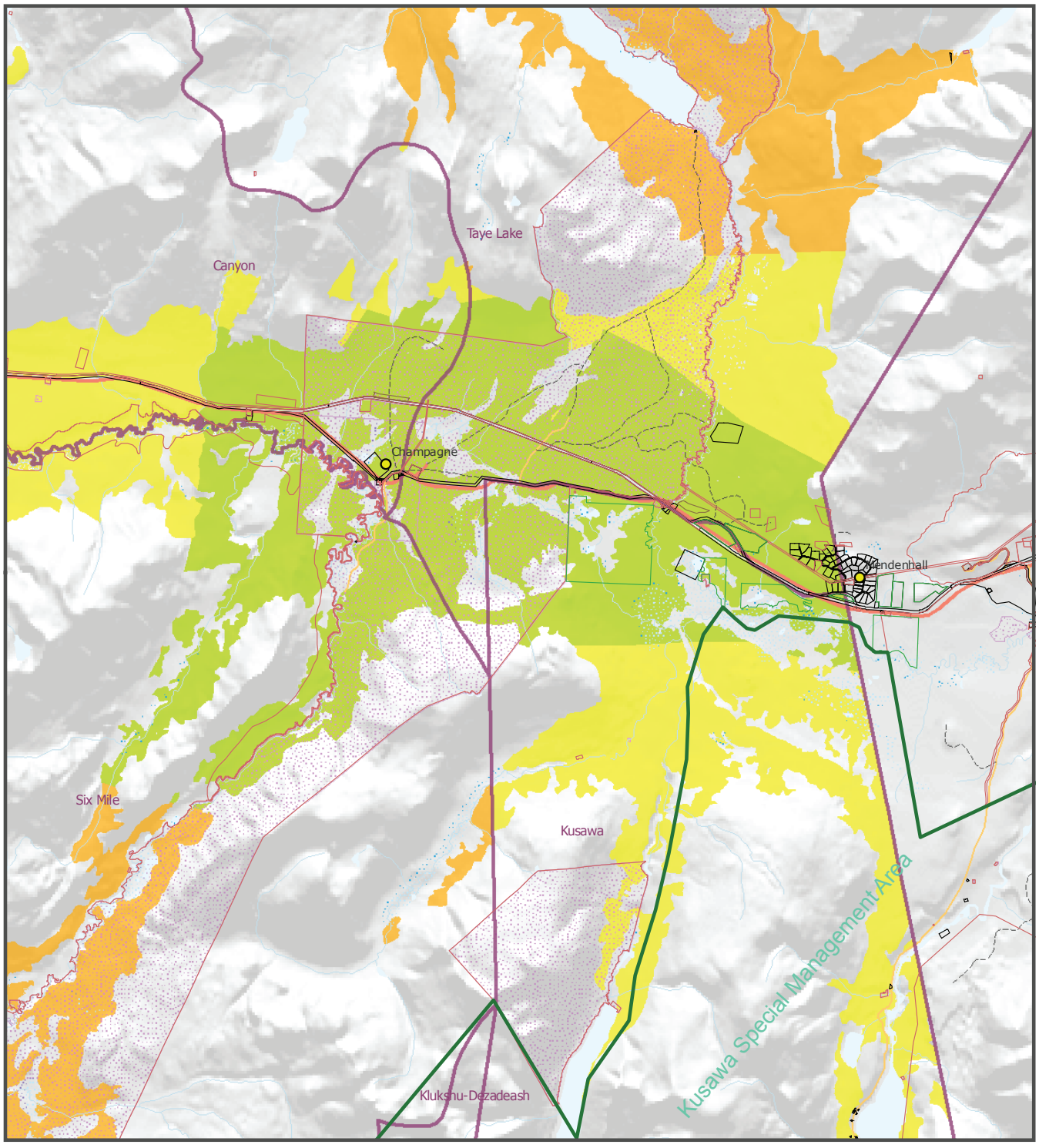


Figure 12:
Land Designations & SFMP Landscape Units (East)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

6. APPENDIX 3 MAPS

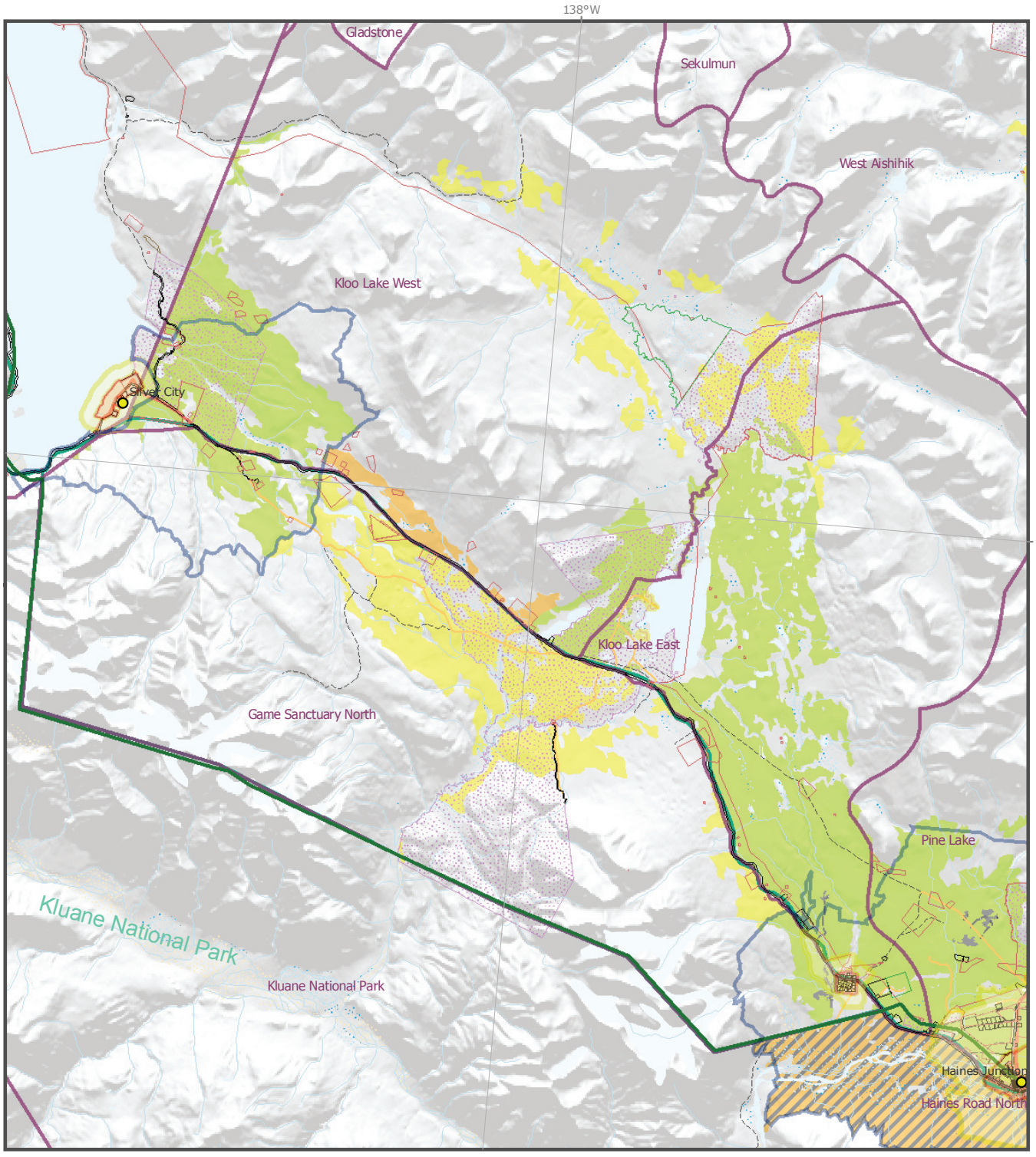


Figure 13:
Fuel Abatement Zones (Northwest)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

0 2.5 5 10
Kilometers

Albers Equal Area Projection

Communities
Kluane National Park & Reserve
SFMP Landscape Units
CAFN Settlement Lands

Land Designations
Protected Areas
Pipeline Easement
Agricultural Dispositions
Land Dispositions
Surveyed Lots

Resource Management Zones
Forest Resource Management Zone
Conservation Forest Management Zone
Provisional Forest Management Zone
Kluane NP DRAFT Fire Abatement Area

Fuel Abatement Zones
Interface Zone
Community Zone
Landscape Zone

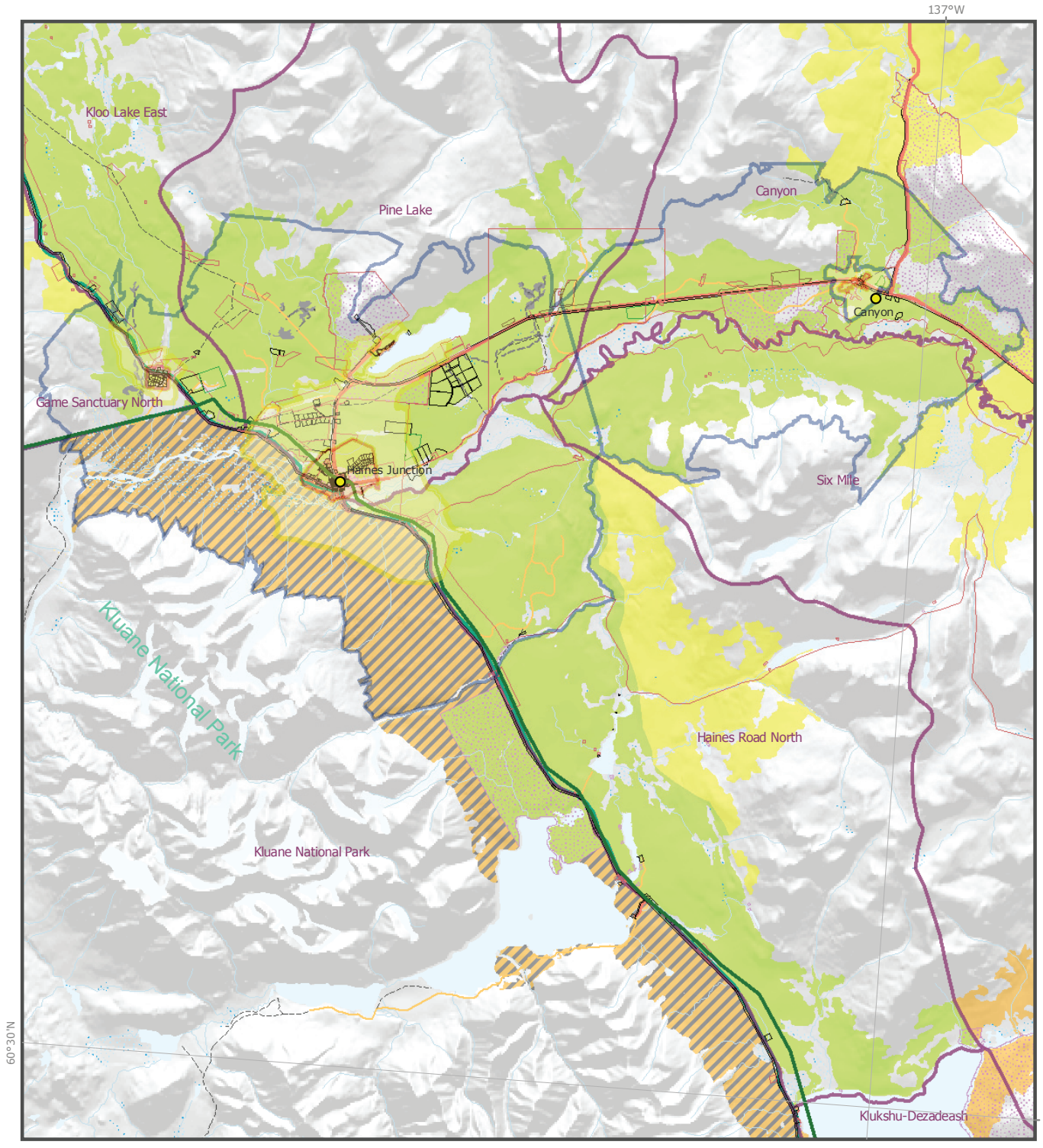


Figure 14:
Fuel Abatement Zones (Central)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

6. APPENDIX 3 MAPS

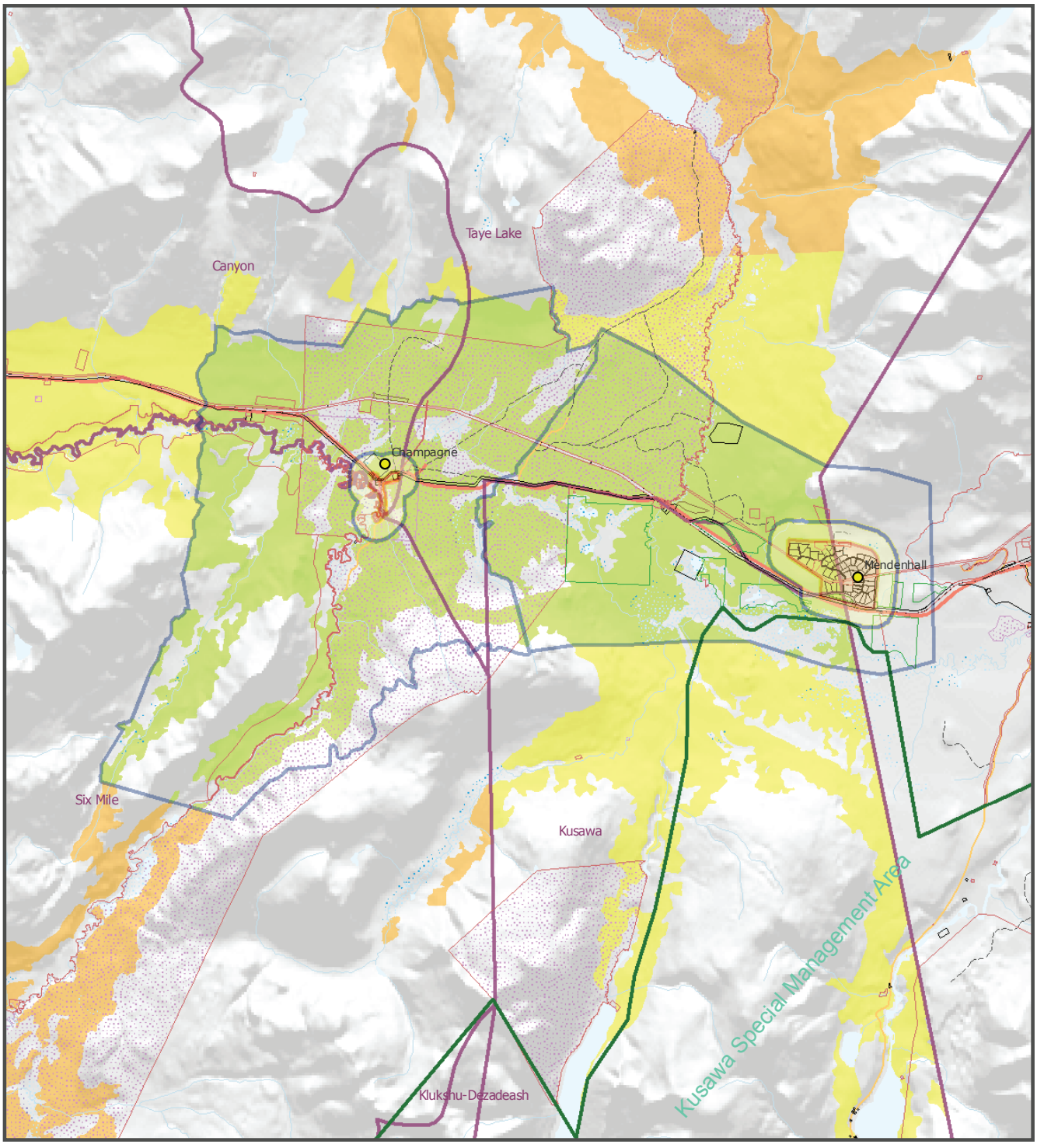


Figure 15:
Fuel Abatement Zones (East)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

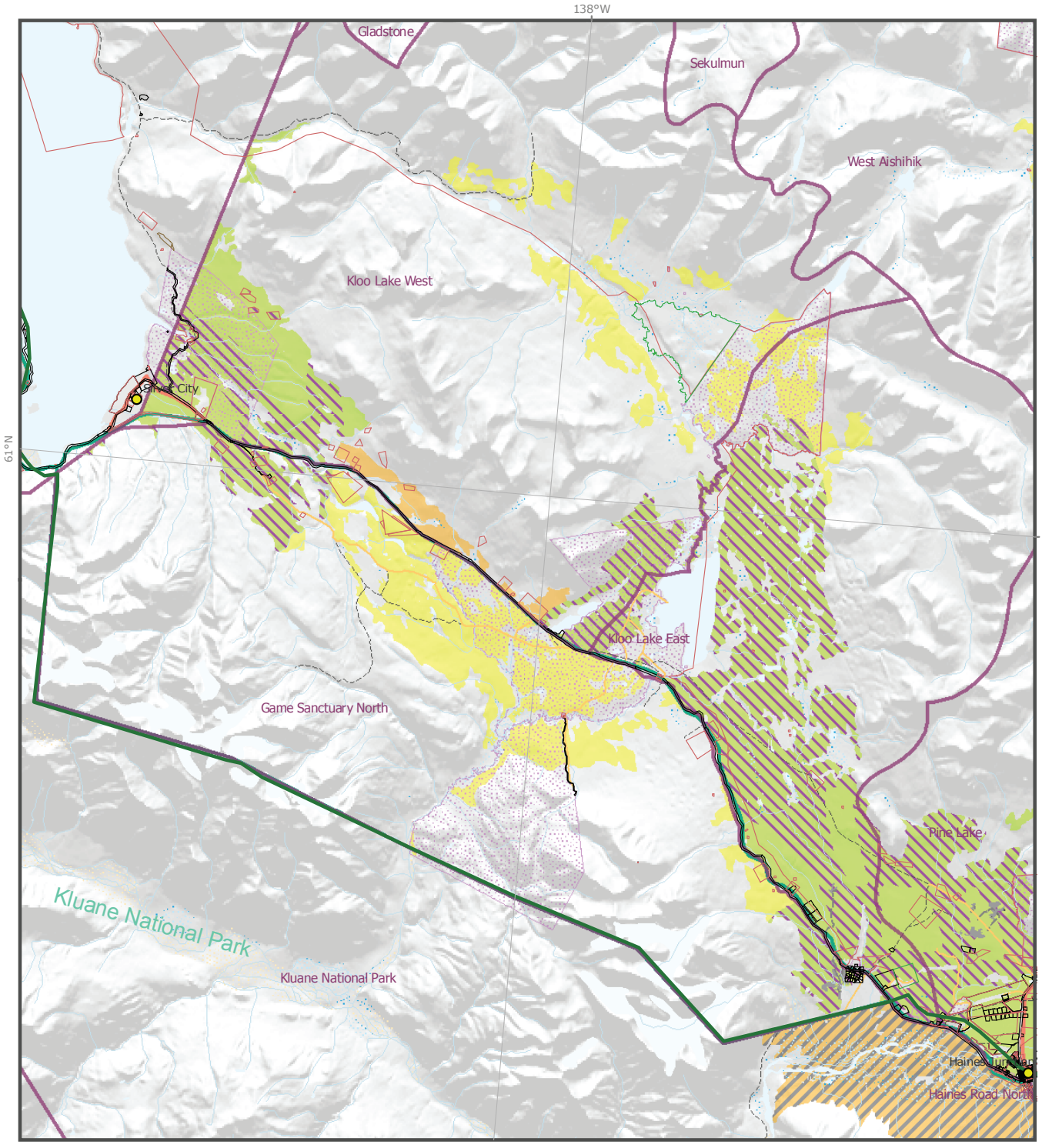


Figure 16:
Wildlife Value Areas (Northwest)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

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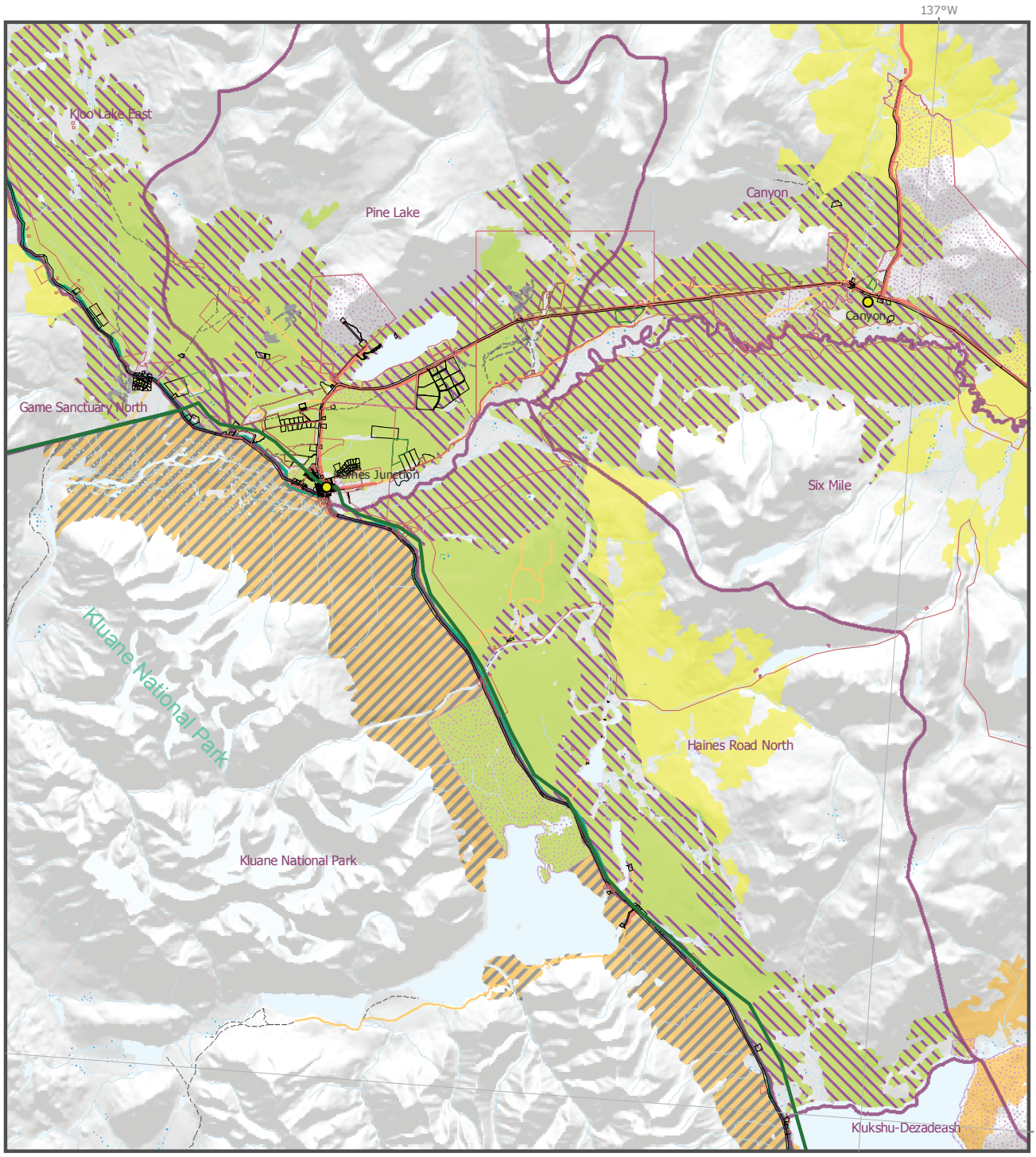

Figure 17:
Wildlife Value Areas (Central)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

0 2.5 5 10
Kilometers

Albers Equal Area Projection

Communities
Kluane National Park & Reserve
SFMP Landscape Units
CAFN Settlement Lands

Land Designations
Protected Areas
Pipeline Easement
Agricultural Dispositions
Land Dispositions
Surveyed Lots

Resource Management Zones
Forest Resource Management Zone
Conservation Forest Management Zone
Provisional Forest Management Zone
Kluane NP DRAFT Fire Abatement Area

Identified FRMZ Wildlife Value Areas

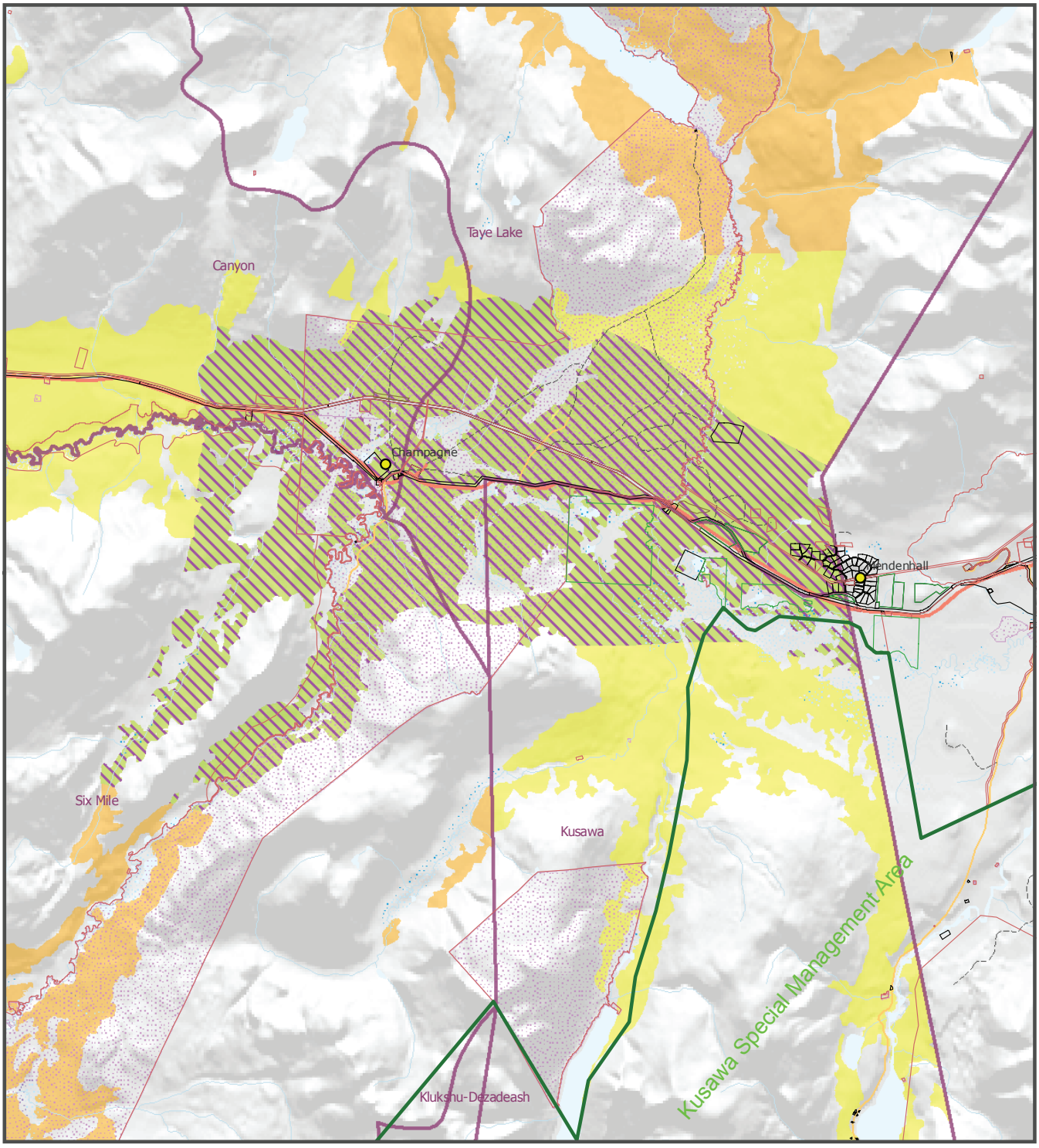

Figure 18:
Wildlife Value Areas (East)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

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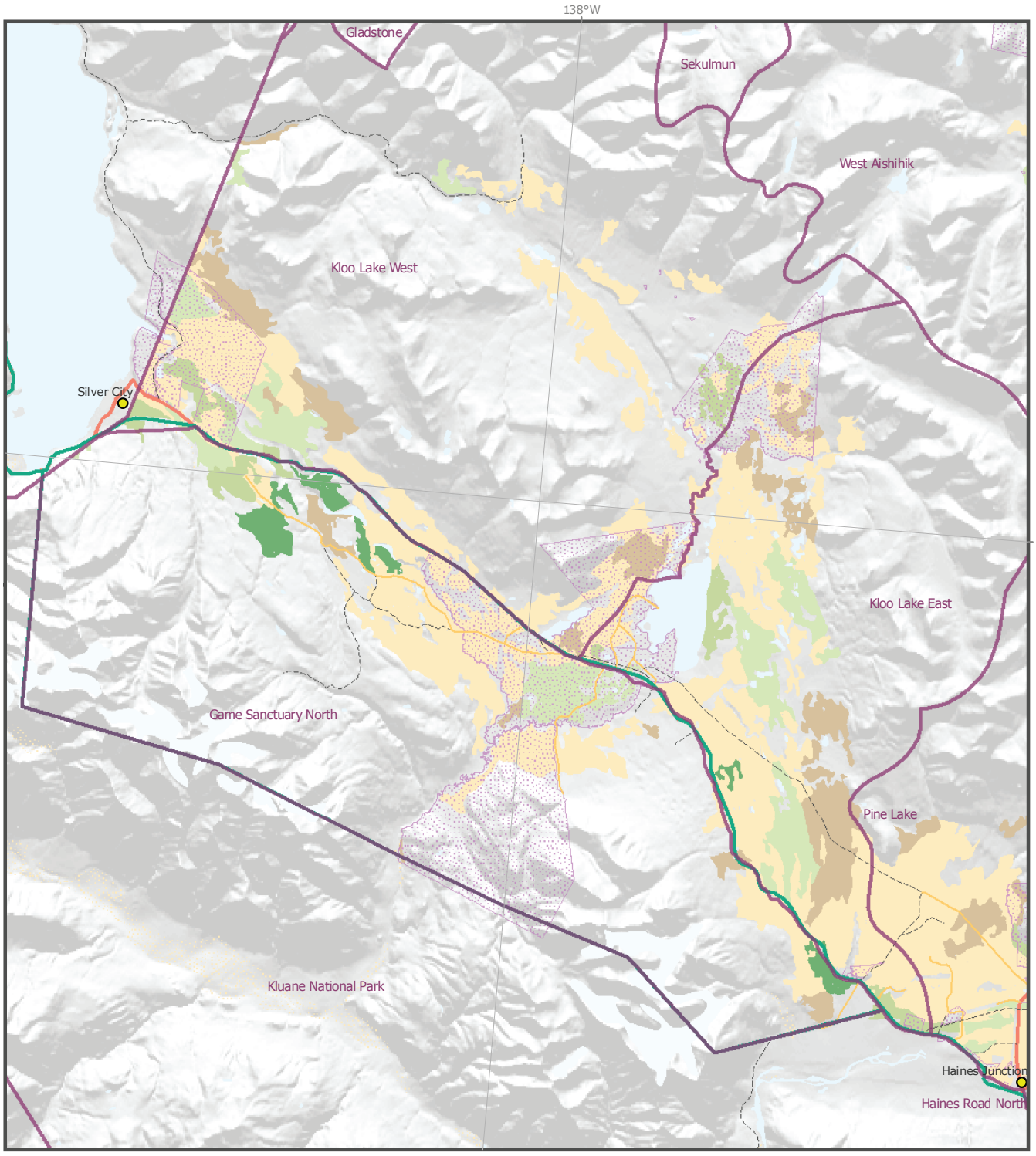

Figure 19:
Timber Volume Class Estimates (Northwest)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

0 2.5 5 10
Kilometers

Albers Equal Area Projection

Communities
Kluane National Park & Reserve
SFMP Landscape Units
CAFN Settlement Lands
Road
Limited-use road
Trail
Cut line
Logging Roads

Timber Volume Estimates (m3/Ha)
0 - 25
26 - 50
51 - 75
76 - 100
101 - 150
151 - 200
200+

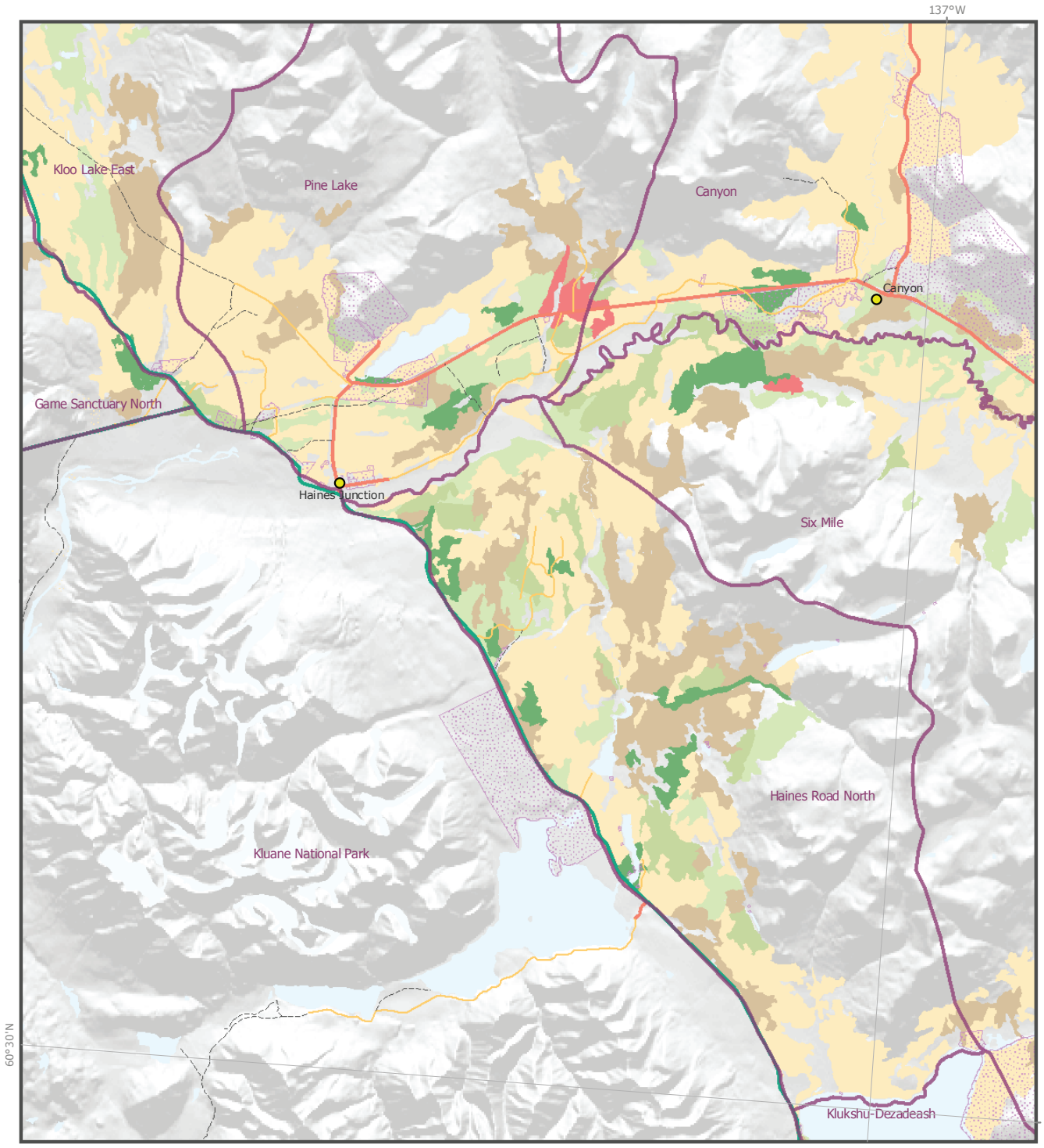

Figure 20:
Timber Volume Class Estimates (Central)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

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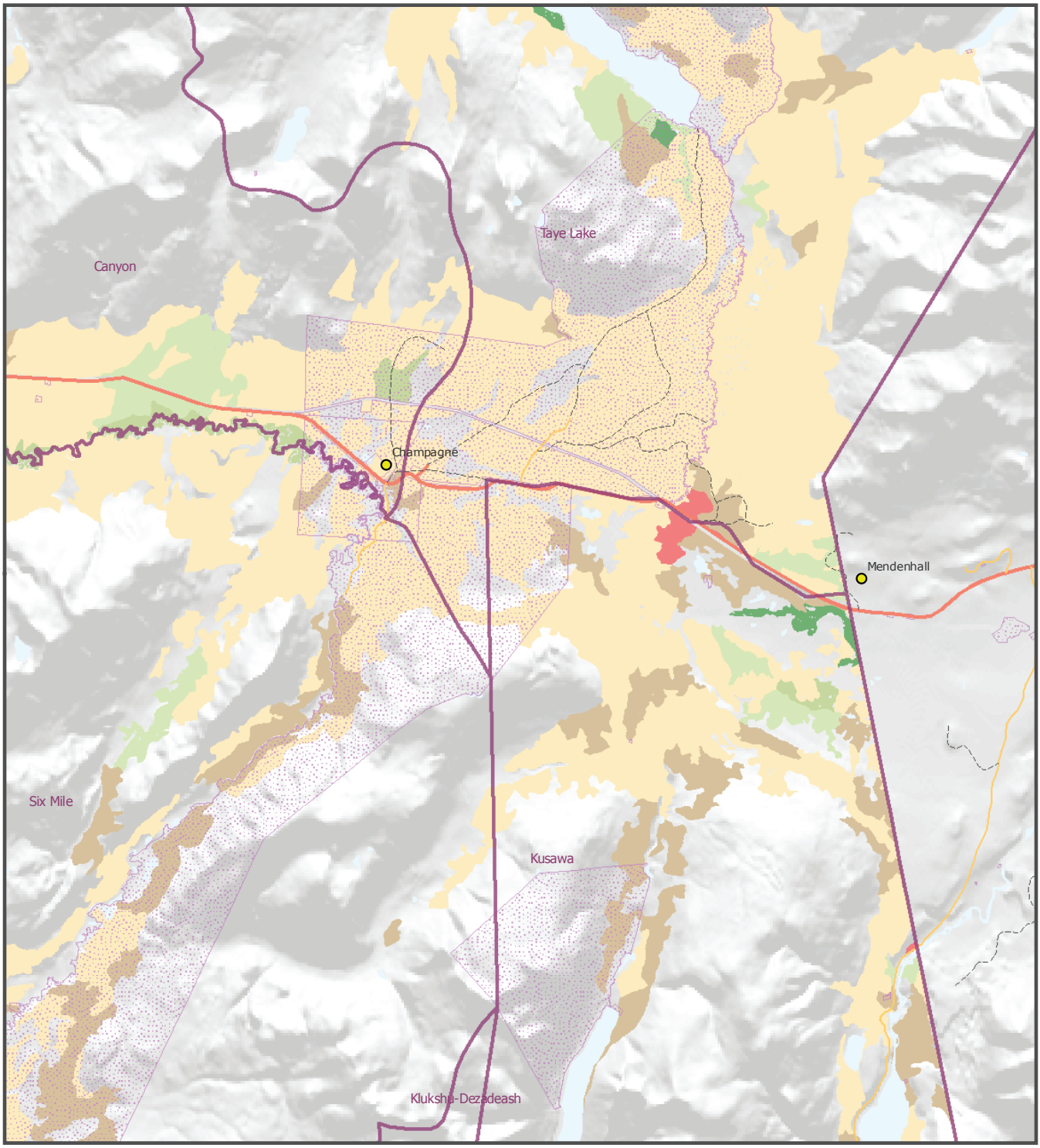

Figure 21:
Timber Volume Class Estimates (East)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

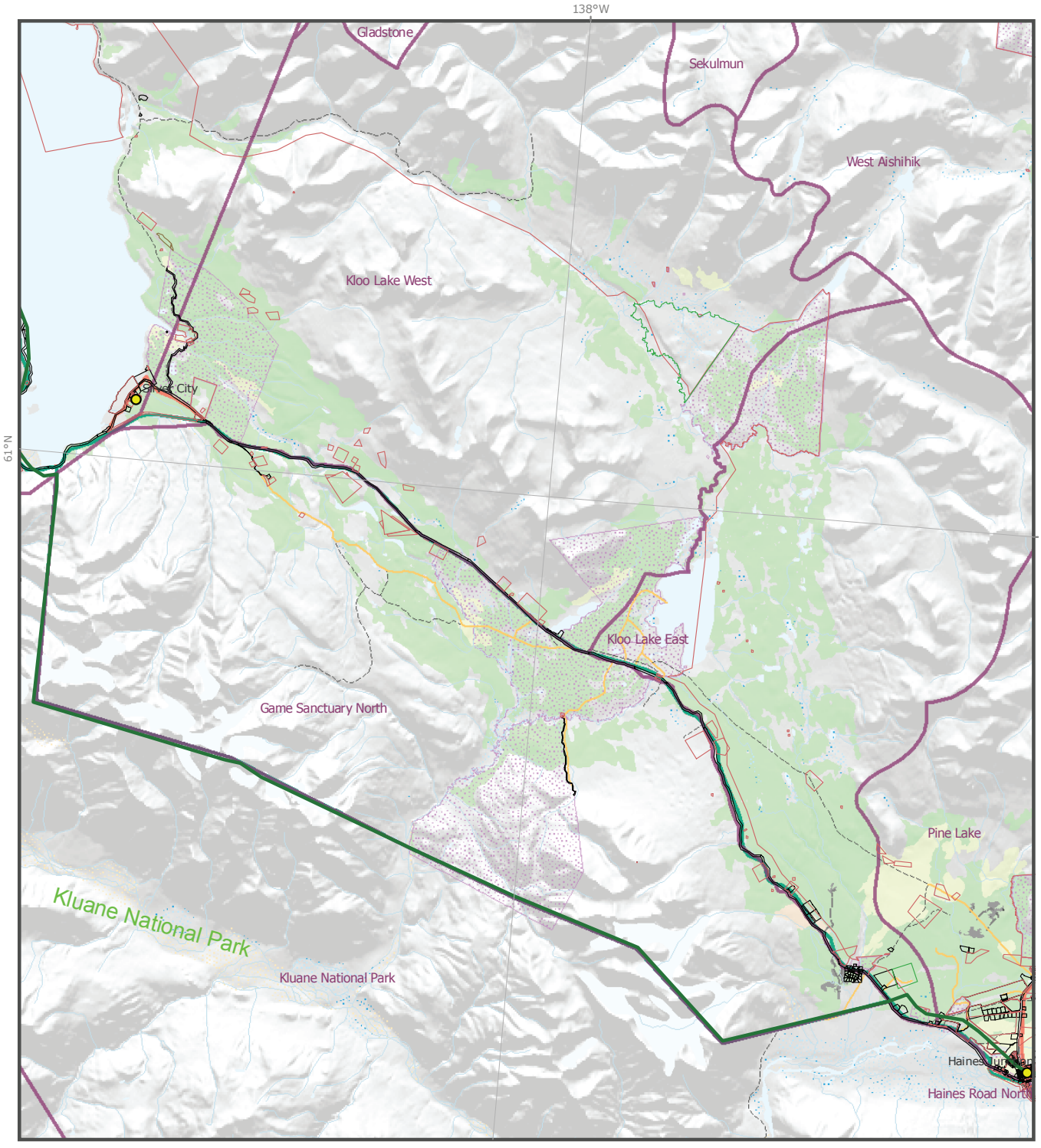

Figure 22:
Forest Cover by Leading Species (Northwest)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

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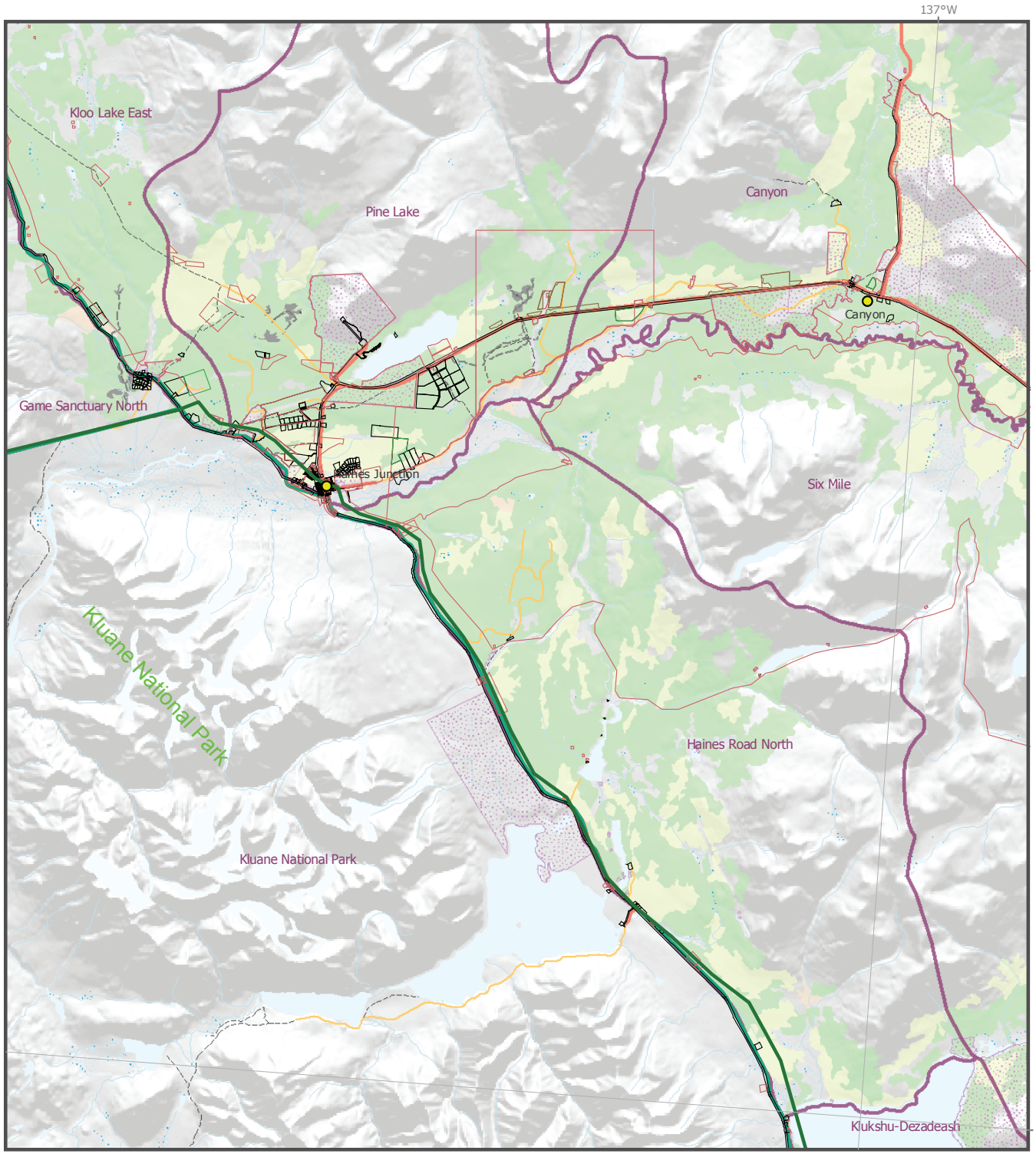

Figure 23:
Forest Cover by Leading Species (Central)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

0 2.5 5 10
Kilometers

Albers Equal Area Projection

Communities
Kluane National Park & Reserve
SFMP Landscape Units
CAFN Settlement Lands

Land Designations
Protected Areas
Pipeline Easement
Agricultural Dispositions
Land Dispositions
Surveyed Lots

Forest Cover - Leading Species
White Spruce
Lodgepole Pine
Alpine Fir
Black Spruce
Balsam Poplar
Trembling Aspen
White Birch
Larch

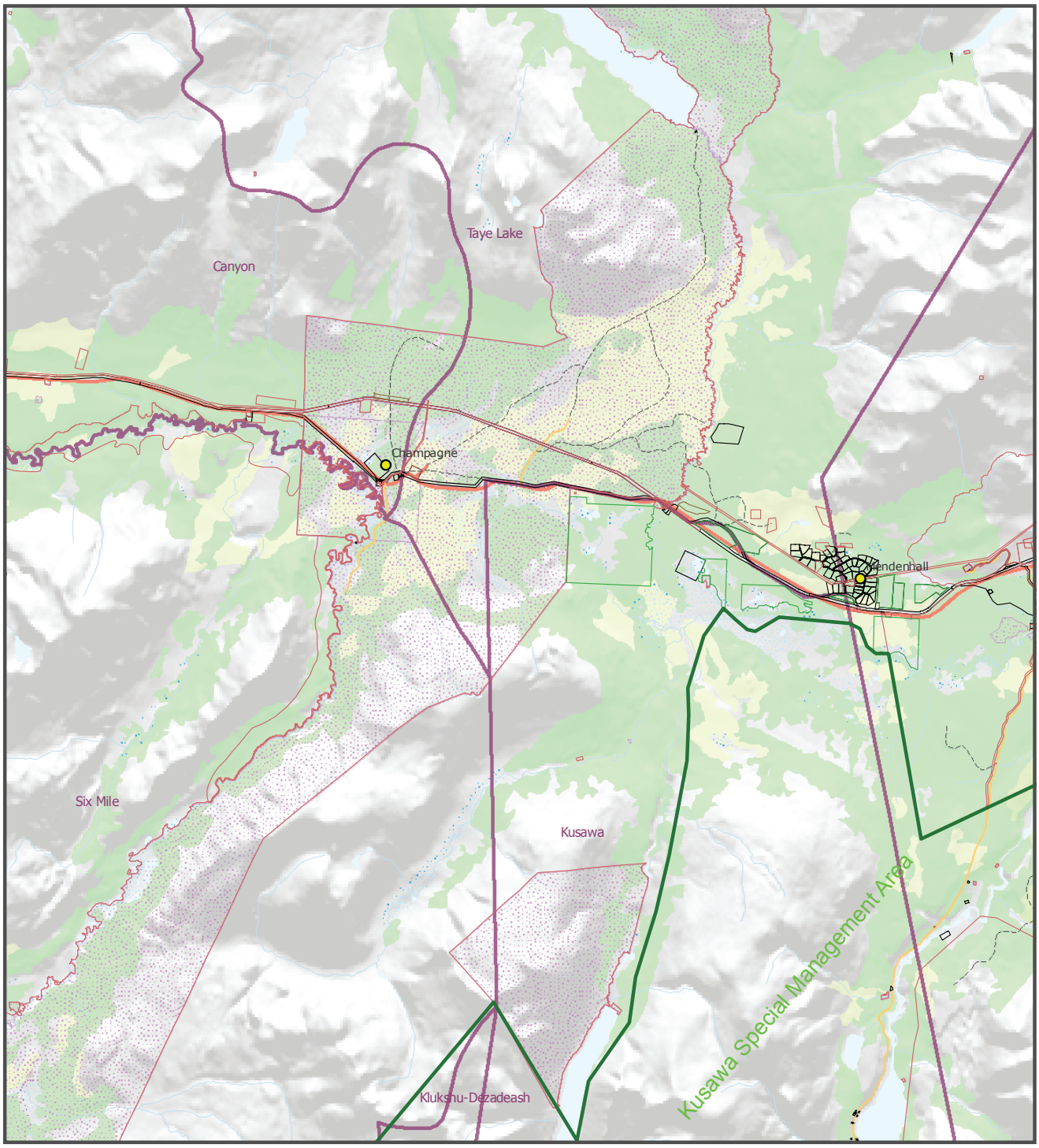

Figure 24:
Forest Cover by Leading Species (East)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

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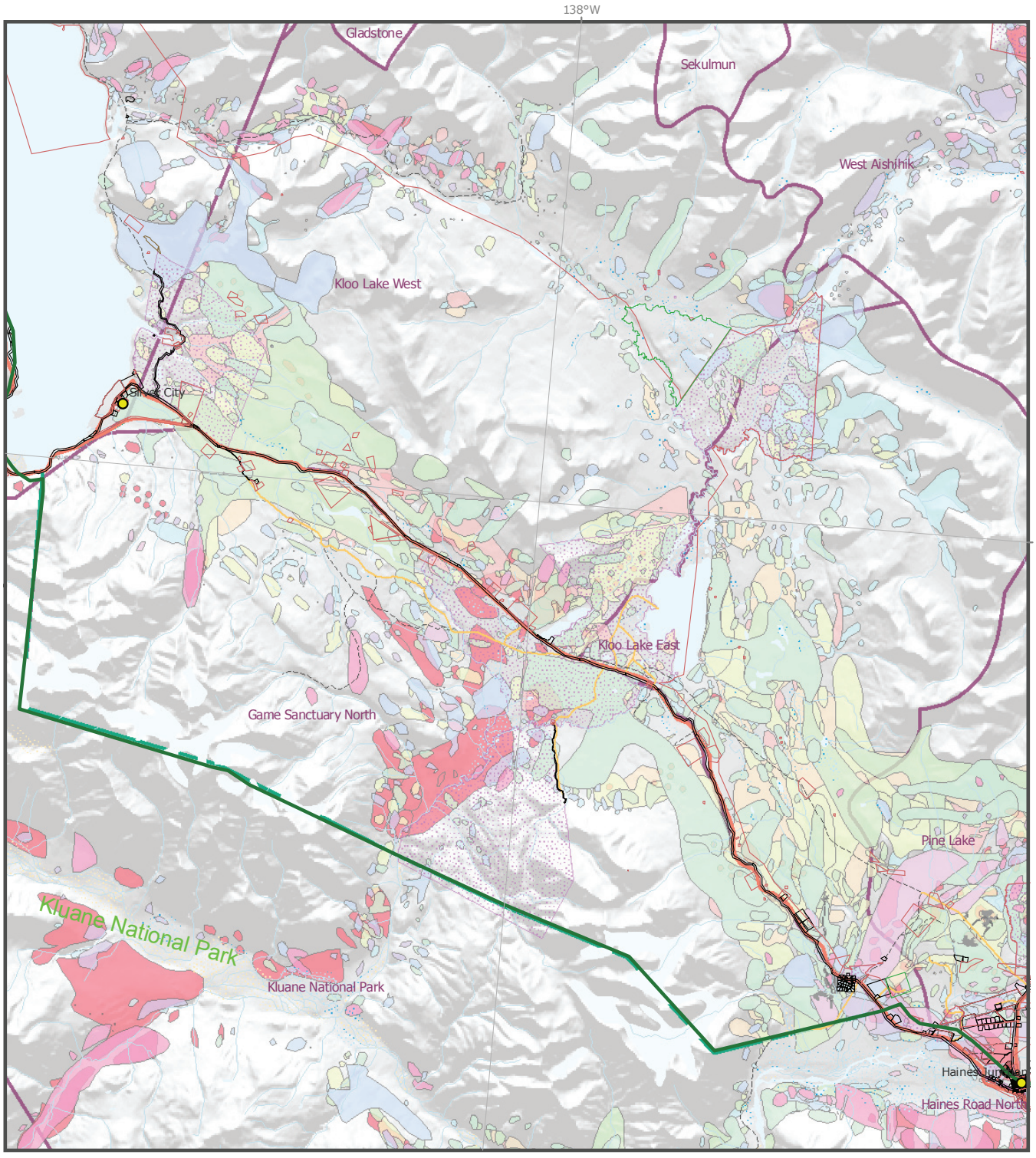

Figure 25:
Spruce Bark Beetle Infestation (Northwest)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

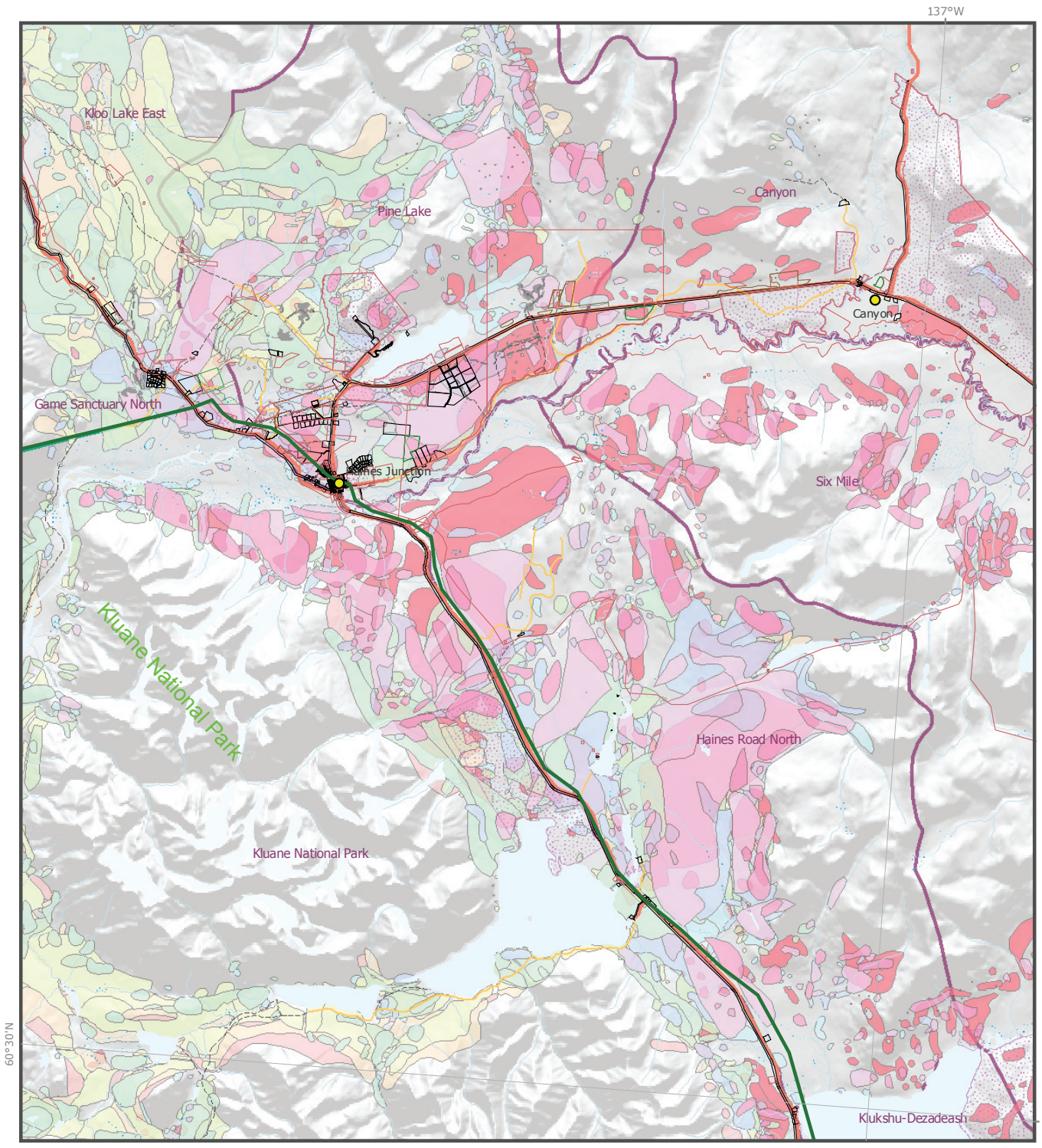

Figure 26:
Spruce Bark Beetle Infestation (Central)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

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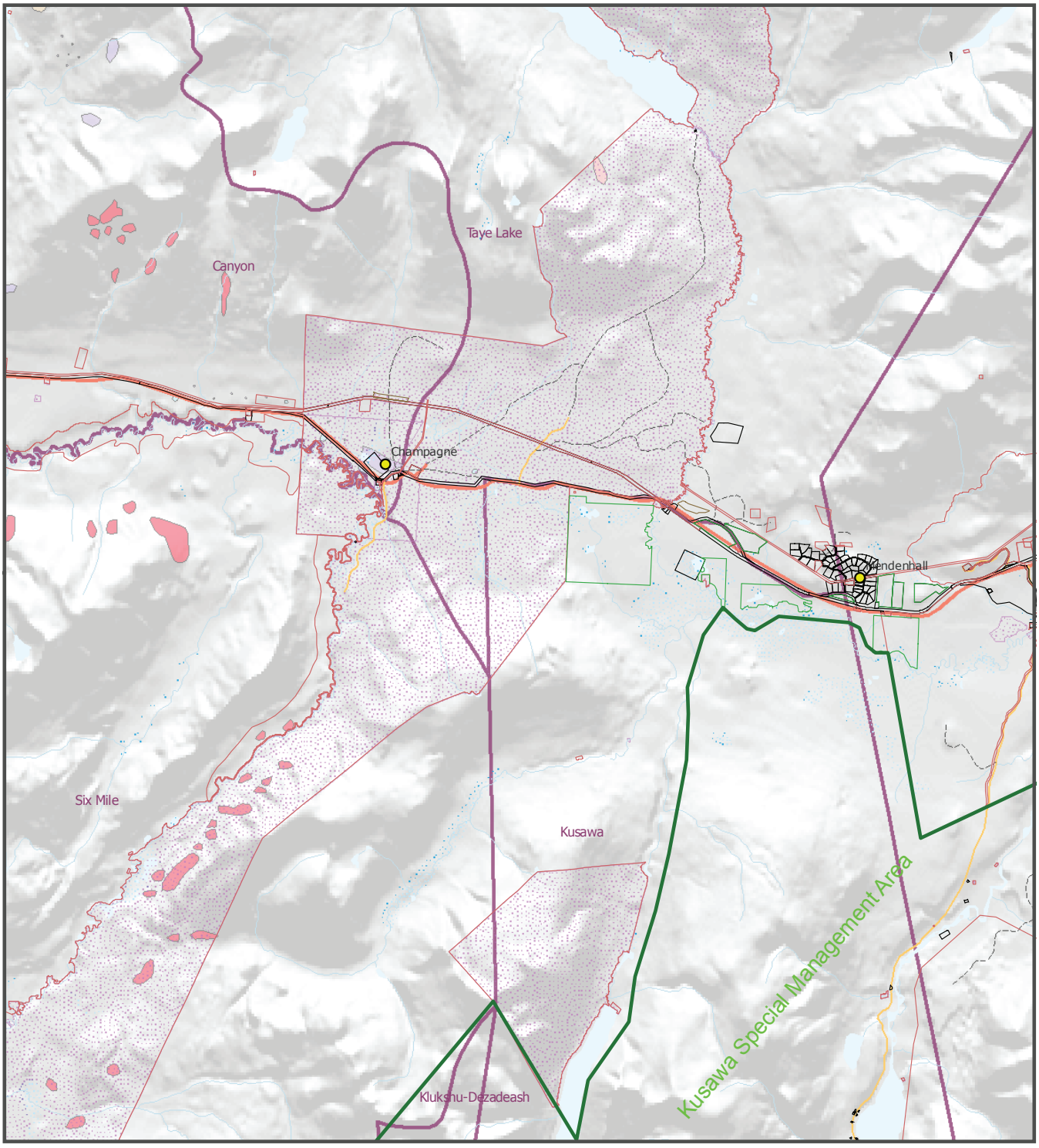

Figure 27:
Spruce Bark Beetle Infestation (East)

Champagne and Aishihik Traditional Territory
Integrated Landscape Plan : March 2006

Digital data provided by Yukon Government, Champagne and Aishihik First Nations, Government of Canada. and agencies contracted by the above organizations.

0 2 4 8
Kilometers

Albers Equal Area Projection