Statement of Work

1. Title:

Wood Buffalo National Park Wildfire Reclamation 2024.

Wood Buffalo National Park, Canada

2. Objective(s):

The primary objective of this project is to reclaim dozer guards that were established during the 2023 Wildfire Season, which are only accessible during the winter freeze due to wetland features where they exist on the landscape.

3. Background:

The dozer guards in Wood Buffalo National Park in all figures highlighted in blue require reclamation after the 2023 Wildfire Season. The areas highlighted in blue are the sections of line which are wetland features and are only accessible during the winter months when frozen.

The area is made up of six units (units A-F), which have varying sizes. The units were divided based on geographic location (Appendix 1). These units are areas composed of burned stands of trees from the previous season's wildfires on the landscape. Only Unit B (Priority 1) and Unit C (Priority 2) require winter reclamation.

The overarching goal for these units over the winter months is to reclaim the wetland sections of dozer guard, while they are frozen to get them to a state which will promote natural growth in years to come.

Scope of Work:

3.1 Tasks/Technical Specifications:

- The Contractor will confirm the feasibility and accessibility of heavy equipment to complete required reclamation work, as outlined in Appendix 2.
- The Contractor must complete dozer guard reclamation and project as outlined in Appendix 2.
- The Contractor must provide a per kilometer cost assessment by unit (unit b vs. unit c) based on reclamation work outlined in Appendix 2.
- The Contractor must have prior experience conducting wildfire reclamation projects.

3.2 Considerations:

- Wildlife wintering in the area.

3.3 Constraints:

- The contractor must complete Reclamation before spring thaw.

3.4 Travel:

The Contractor will be responsible for providing all modes of travel/transportation required for completion of the project.

3.5 Meetings:

The Contractor and Parks Canada Agency representative responsible for the project will schedule meetings at the following times:

- The Contractor will meet with the Parks Canada Agency (PCA) representative responsible for the project before commencement of the project. This meeting can be in-person or virtual.
- The Contractor and PCA representative must organize a site visit before the commencement of the project.
- The Contractor will coordinate a minimum of one scheduled progress meeting throughout the duration of the project.
- The Contractor must schedule a meeting after completion of the project.

3.6 Deliverables and Timelines:

Timeline for the completion of this project is the following:

- March 31, 2024.

3.7 Official Language Obligations

The Contractor will be expected to communicate all findings from the final report document in English as the official language.

4. Health and Safety and Environment

The Contractor will ensure that adequate spill kits and containment mechanisms are on site that can hold two times the amount of fuel on a piece of heavy equipment. The Contractor will be responsible to have their own Health and Safety Plan in place on the work sites.

5. Parks Canada Responsibilities

- The Parks Canada representative coordinating this project must provide the following:
  - Maps of the area
  - Availability for consultation at any time of the project.
  - GIS Shapefiles if required.

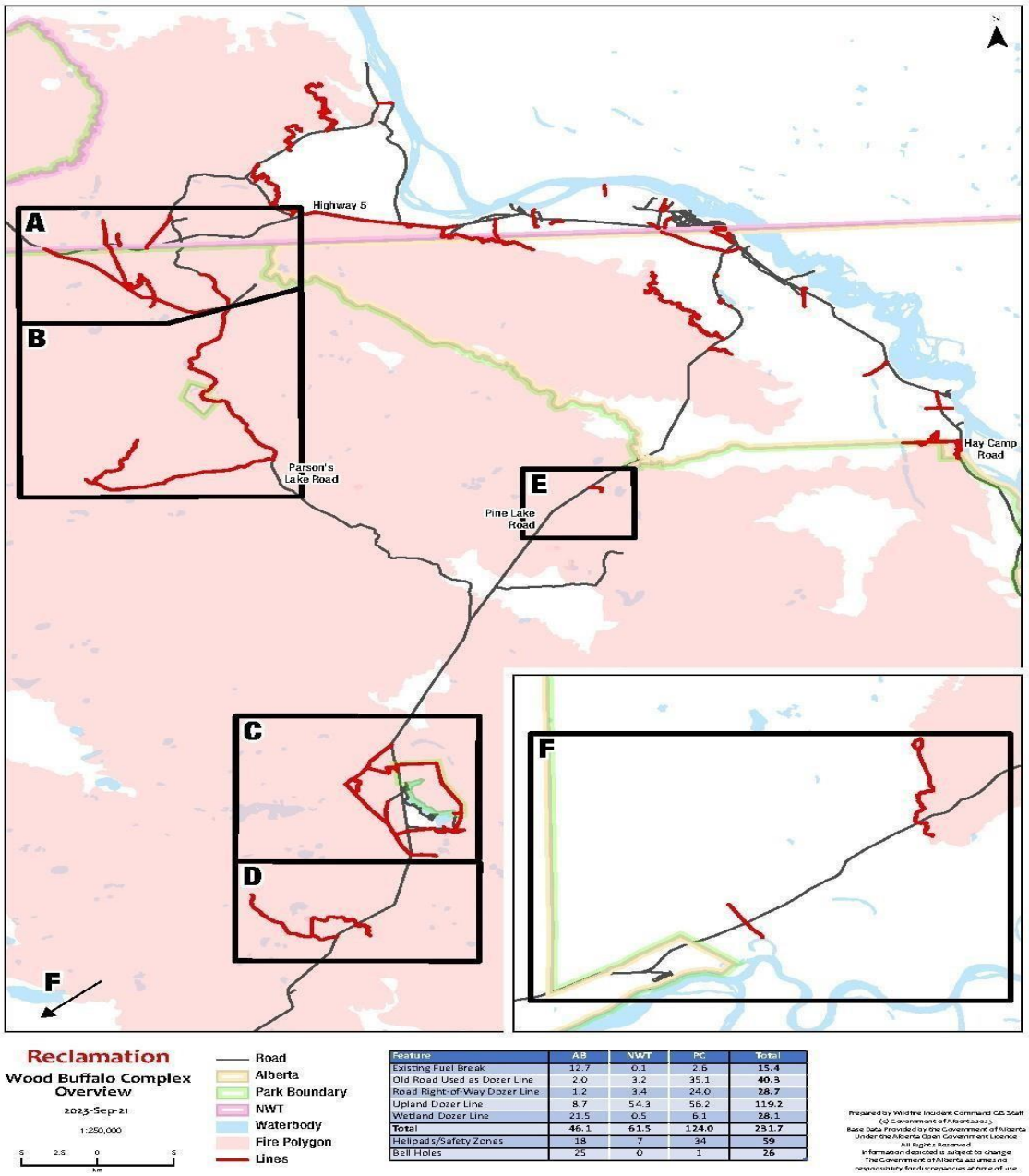
6.0 Basis of Payment

The work will be compensated, inclusive of travel, mileage, accommodations, and miscellaneous costs based on a detailed and itemized invoice. The invoice must not exceed the total estimated value provided in the bid. Payment will be made to the Contractor upon successful completion of the project on March 31, 2024

6.1 Invoicing Instructions

The Contractor must submit invoices in accordance with the General Terms & Conditions

Appendix 1. Wood Buffalo National Park showing units A-F and all road features in the area around the units.



Feature	AB	NWT	PC	Total
Existing Fuel Break	12.7	0.1	2.6	15.4
Old Road Used as Dozer Line	2.0	3.2	35.1	40.3
Road Right-of-Way Dozer Line	1.2	3.4	24.0	28.7
Upland Dozer Line	8.7	54.3	56.2	119.2
Wetland Dozer Line	21.5	0.5	6.1	28.1
Total	46.1	61.5	124.0	231.7
Helipads/Safety Zones	18	7	34	59
Bell Holes	25	0	1	26

Figure 1 Reclamation Units for Wood Buffalo National Park Wildfire Complex

Priority 1: Zone B - Parson’s Lake Road

Figure 2 Parson's Lake Road (Unit B). Dozer line in green was completed in Fall 2023. Dozer line in blue will need to be reclaimed this winter.

Priority 2: Zone C – Pine Lake / Kettle Point Area

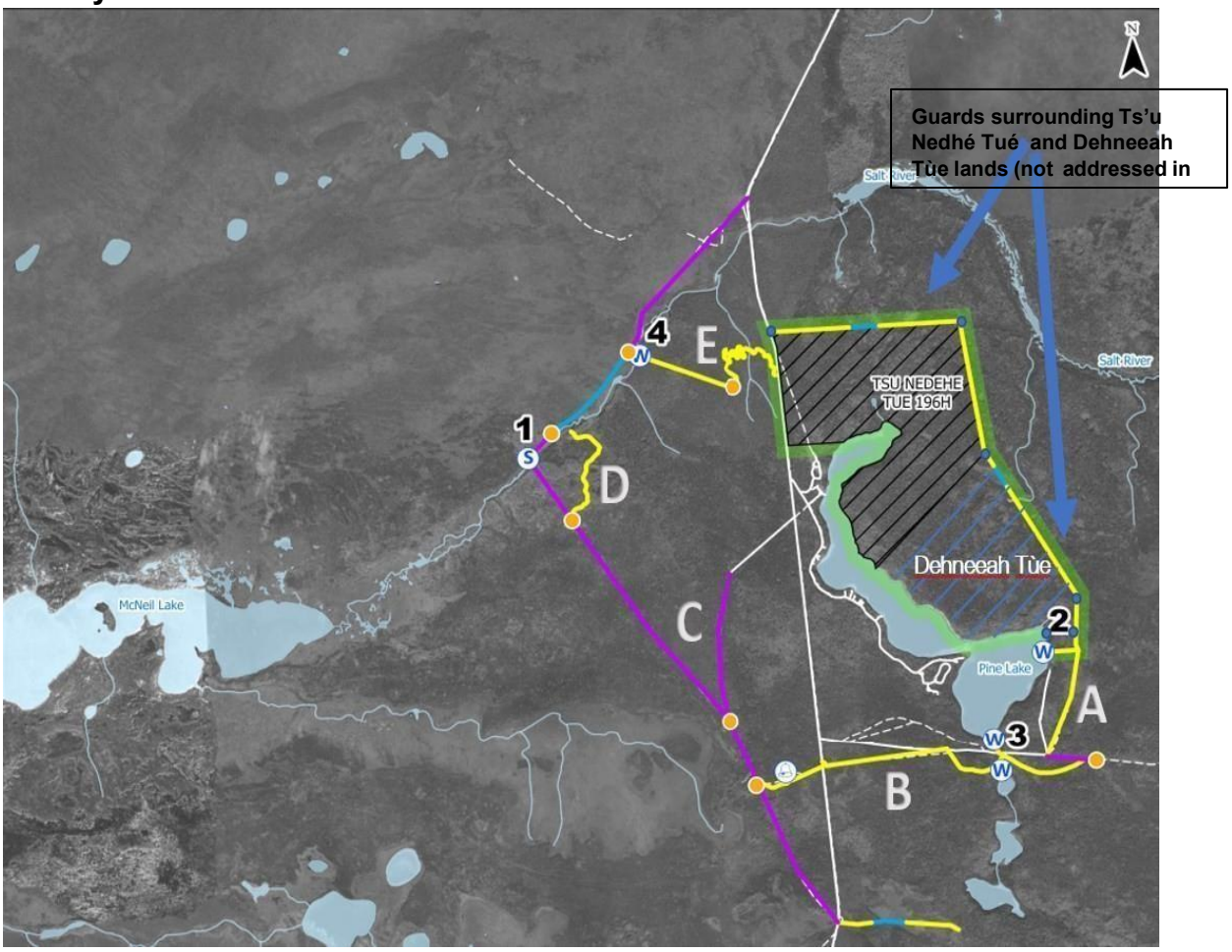


Figure 3 Wood Buffalo Fire Complex Reclamation Zone C.

Priority 2: Zone C – Pine Lake / Kettle Point Area

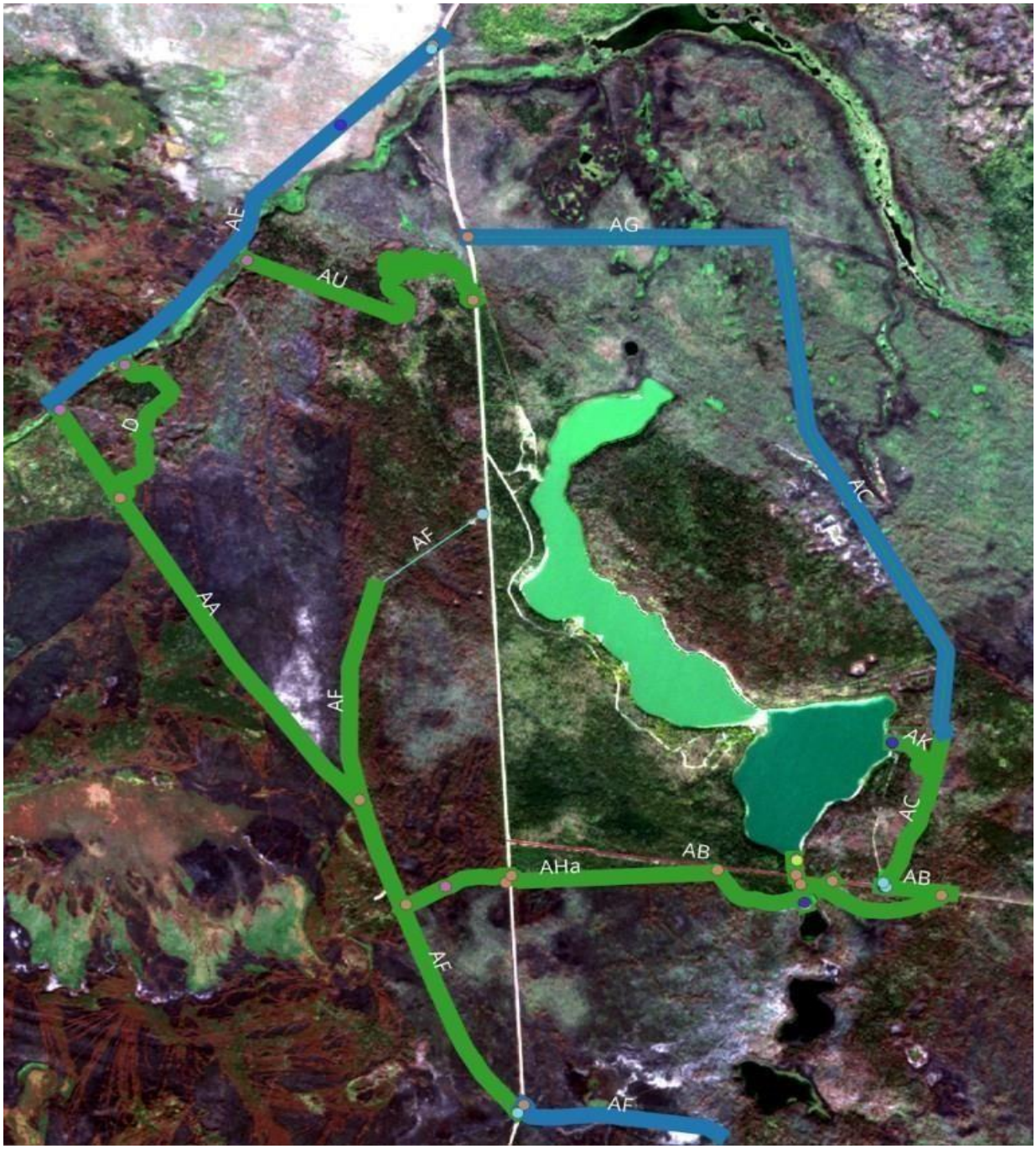


Figure 4 Reclamation for Priority 2 - Pine Lake / Kettle Point (Zone C) Dozer lines in green were completed in Fall 2023. Dozer lines in blue will need to be reclaimed over winter. "AG" and "AC" will need to be addressed at a later date.

Appendix 2

Standard Reclamation Prescriptions for Wetland Areas – Dozer Guard Reclamation

The desired outcome is to remove all future access and return the disturbance to a state where the ecosystem is of similar function as before the disturbance. However, these are more challenging to reclaim than upland sites, and care must be taken to minimize further impacts to soil and vegetation.

Most wet soil dozer guards are dominated by organic soils, but some poorly drained mineral soils. Most are dominated by black spruce. Hydrology is more important than it is for wetland sites. Compacted and bladed areas are likely to be flooded and will not regenerate without reclamation. These can also restrict flow through wetland impacting neighboring vegetation.

There is a chance that some guards were constructed when the soil was frozen, there are areas prone to additional damage if assessed during non-frozen conditions.

- Windrows should be spread back on to the tracks and micro topography re-established.
- An excavator and winter (frozen ground) reclamation are preferred.
- Surface topography should match adjacent topography, smooth is not the goal. Hummocks and the depressions in these landscapes provide microsites for wood vegetation to establish.
- Consider the use of Hummock Transfer Techniques.

Standard Reclamation Prescriptions for Preventing Non-Native Vegetation Establishment

- Sanitize equipment before it travels on guard.
    - Ensure equipment is fully washed before it is transported to the work location. Power wash.
        - Inspect each piece of equipment before commencement.
    - Care should be taken when moving equipment between sites. Non-native vegetation is already present on the landscape.

Standard Reclamation Prescriptions for Bell Holes

Bell Holes are dug with an excavator to access groundwater. The Reclamation goal is to:

- When being completed in winter, soil can be piled on top of ice. This will fill the hole when the ice melts.

Remediation Techniques: Rough and Loose

Rough and loose reclamation is mounding technique that has been historically used to de-compact soils and provide microsites for establishment of trees and other vegetation. However, it has been used as an effective strategy to discourage off road vehicle access and mitigate erosion hazard.

This technique mimics the hole and mound the rootball leaves when a tree falls. An excavator digs a hole and places the soil on the edge of the hole such that half the soil falls into the hole and half on the surface. The excavator bucket size should be comparable to the size of tree root balls in the region. If rootballs are available in the windrow berms, they can place in the holes to help the trees lay flat and decompose.

The density of the holes depends on the objective:

- If used to provide surface roughness, to promote forest regeneration, the density should be like the surrounding areas.

- The density must be much higher to deter access and to mitigate erosion hazard.
- Coarse Wood Debris (CWB) in a Mixedwood Forest, the goal is to achieve 60pieces/ha. Reclaiming areas after fire may not allow for this density. In these cases, apply what is available and ensure the trees are pushed into the be