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Miitigoog LP



ANNUAL WORK SCHEDULE
for the
KENORA FOREST SUSTAINABLE FOREST LICENCE (#550400)
MNRF Kenora District, Northwest Region

for the one-year period from April 1, 2023 to March 31, 2024

Kenora Forest Sustainable Forest License
2023 – 2032 Forest Management Plan

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Annual Work Schedule - Title, Certification and Approval Page

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KENORA FOREST SUSTAINABLE FOREST LICENCE

MNRF Kenora District, Northwestern Region

Miitigoog LP

for the one-year period from April 1, 2023 to March 31, 2024

We hereby confirm that this annual work schedule has been prepared in accordance with the requirements of the Forest Management Planning Manual and the Forest Information Manual, and is consistent with the approved forest management plan.

Prepared By: _____ March 14, 2023
Kurt Pochailo, R.P.F., (date)
Miisun Integrated Resource Management Co.

Submitted By: _____ March 14, 2023
Shannon Rawn, R.P.F. (date)
General Manager, Miisun IRM

I hereby certify that the access, harvest, renewal and maintenance operations which are scheduled in this annual work schedule have been developed in accordance with the requirements of the Forest Management Planning Manual.

RPF Seal _____ March 14, 2023
Kurt Pochailo, R.P.F. (date)
Miisun Integrated Resource Management Co.

NRIP Submission Identifier: FM-644-2023-AWS-281

The original signed and stamped version of this page is retained at MNRF Kenora District office and the Miitigoog/Miisun office in Kenora.

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HIGHER RISK WATER CROSSING APPROVAL PAGE
for the
KENORA FOREST
MNRF Kenora District, Northwestern Region
Miitigoog LP
for the one-year period from April 1, 2023 to March 31, 2024

We hereby confirm that this annual work schedule has been prepared in accordance with the requirements of the Forest Management Planning Manual and the Forest Information Manual, and is consistent with the approved forest management plan.

Prepared By: _____ March 14, 2023
Kurt Pochailo, R.P.F., (date)
Miisun Integrated Resource Management Co.

Submitted By: _____ March 14, 2023
Shannon Rawn, R.P.F. (date)
General Manager, Miisun IRM

I hereby certify that the forest operations which are scheduled in this annual work schedule have been developed in accordance with the requirements of the Forest Management Planning Manual.

RPF Seal _____ March 14, 2023
Kurt Pochailo, R.P.F. (date)
Miisun Integrated Resource Management Co.

I have read this higher risk water crossing submission, and found it to be complete and consistent with the approved forest management plan.

Approved By: _____
Brian Kilgour (date)
MNRF Kenora District Manager

NRIP Submission Identifier: FM-644-2023-AWS-281

The original signed and stamped version of this page is retained at MNRF Kenora District office and the Miitigoog/Miisun office in Kenora.

1	Table of Contents	
2	3.1 INTRODUCTION	7
	3.2 HARVEST AREA	8
	3.2.2 RENEWAL AND MAINTENANCE	11
	3.2.3 ROADS	12
	3.2.3.1 Water Crossings	12
	3.2.3.2 Other Crossings of AOCs	12
	3.2.3.3 Water Crossing Decommissioning	12
	3.2.3.4 Aggregates	13
	3.2.3.4 Existing Roads	13
	3.2.4 FIRE PREVENTION AND PERPARDNESS	15
	3.2.5 MONITORING AND ASSESMENT	17
	APPENDIX A (COMPLIANCE REPORTING AREAS)	
	APPENDIX B (FIRE PLAN)	
	APPENDIX C (Water Crossing Standards for the Kenora Forest)	

1 **3.1 INTRODUCTION**

2
3 The Kenora Forest is located in the Kenora District of the Northwestern Region of the Ontario
4 Ministry of Natural Resources and Forestry (MNRF). The Kenora Forest Sustainable Forest
5 License (SFL #550400) is held by Miitigoog Limited Partnership. Miitigoog General Partner Inc.
6 has prepared this annual work schedule on behalf of the shareholders and partners of Miitigoog
7 Limited Partnership, with support from Miisun Integrated Forest Management Co. The Miisun
8 office is located in Kenora on Ninth Street North. This annual work schedule (AWS) encompasses
9 forestry operations for the period from April 1, 2023 to March 31, 2024 on the Kenora Forest SFL.
10 This Annual Work Schedule coincides with the ten-year 2022-2032 Forest Management Plan
11 (FMP) for the Kenora Forest.

12
13 The AWS includes operations (harvest, renewal, tending, protection, road construction and
14 maintenance, compliance) which were planned and approved in the FMP, and are scheduled for
15 implementation during the AWS period. Conditions on regular operations identified in the 2022-
16 2032 Forest Management Plan (FMP) for the Kenora Forest will be followed in the implementation
17 of this AWS. The text, tables and information products associated with this AWS have been
18 produced in accordance with the Forest Management Planning Manual for Ontario's Crown
19 Forests (MNRF, 2020). All information products submitted with the annual work schedule are in
20 accordance with the requirements of the current version of the Forest Information Manual and
21 related Technical Specifications.

3.2 HARVEST AREA

The area scheduled for harvest in this AWS has been selected from the 2022 Forest Management Plan (FMP). Within this AWS there are 11,510 hectares of harvest area identified, 9,438ha of Regular and 2,072ha of bridging. The regular harvest is highest in the PJD, HMX and POD forest units. The allocation by forest unit for the 2023-2024 AWS can be seen in the table below.

Forest Unit	Bridging Area (ha)	Regular Area (ha)	Total Area (ha)
BFM	-	39	39
CMX	481	646	1,127
HMX	726	2,159	2,885
HRD	-	1,200	1,200
OTH	72	-	72
PJD	116	3,470	3,586
PJM	167	35	202
POD	201	1,510	1,711
PRW	150	86	235
SBL	-	239	239
SBM	-	55	55
SPD	122	-	122
SPM	37	-	37
Total	2,072	9,438	11,510

The actual area harvested on the Kenora Forest in recent years has been well below the planned levels. Although Kenora Forest Products (KFP) sawmill has shut down for an undisclosed length of time the conifer from the Kenora Forest will continue to flow to Interfor in Ear Falls. Weyerhaeuser will continue to operate at between 80-100% capacity during the 2023-2024 operating season. Recently Devlin Timber has sold their harvesting quota on the Kenora Forest and will not be operating as of April 1, 2023. An established harvesting contractor has been secured to take the place of Devlin Timber and will begin operations during the 2023-2024 operating period, if not before. Local contractors will continue to move wood to all available markets. It is believed that harvesting level will be increased over the previous few years, but it is not expected to exceed 3,000 hectares total.

The reason for the high level of harvest area included in the AWS this year is because many blocks have been included for road construction purposes, blocks for “clean-up” (areas partially harvested in a previous year) and bridging blocks. Miiitigoog may be utilizing additional road building crews to build advanced roads for 2023-2024, and as such additional harvest blocks were added to the AWS so that the right-of-ways may be cleared and advanced road constructed.

Conditions on regular operations are found in Section 4.2.2.2 of the FMP. These conditions include prescriptions for the following:

- 1 • Balsam Fir – Unmerchantable
- 2 • Biofibre Harvest
- 3 • Canoe-Grade White Birch and Cedar Trees
- 4 • Dens of Furbearing Mammals – Transitory Features (see Table FMP-11 for AOCs for
- 5 known dens)
- 6 • Dens of Furbearing Mammals – Enduring Features
- 7 • Downed Woody Material
- 8 • Erosion
- 9 • Hydrological Impacts
- 10 • Incidental Bur Oak
- 11 • Large, Landscape Patches – Deer Emphasis Areas (DEAs)
- 12 • Large, Landscape Patches – Moose Emphasis Areas (MEAs)
- 13 • Loss of Productive Land
- 14 • Marten Boxes (Traps)
- 15 • Mining Claims and Leases
- 16 • Nests – Songbirds
- 17 • Nests – Occupied Ground Nests
- 18 • Nests – Unoccupied nests/communal roosts in cavities previously used by American
- 19 Kestrel, Barred Owl, Boreal Owl, Eastern Screech-Owl, Great Horned Owl, Northern
- 20 Hawk Owl, Northern Saw-Whet Owl or Chimney Swift
- 21 • Nests – Unoccupied stick nests built or used by Barred Owl, Broad-Winged Hawk,
- 22 Common Raven, Cooper’s Hawk, Great Horned Owl, Long-Eared Owl, Merlin, Red-
- 23 Tailed Hawk or Sharp-Shinned Hawk
- 24 • Nests – Inactive Nests of Great Gray Owl, Northern Goshawk or Red-Shouldered Hawk
- 25 • Nests – Unidentified (Unknown) Stick Nests
- 26 • Nutrient Loss – on Shallow Soil Sites
- 27 • Red Pine and White Pine Aesthetics – along Rush Bay Road, Clytie Bay Road, Woodchuck
- 28 Bay Road and Cameron Drive
- 29 • Red Pine and White Pine, Incidental - within Wabaseemoong Stewardship Area
- 30 • Residual Forest – Mapped
- 31 • Residual Forest – Unmapped
- 32 • Rich Lowland Hardwood-Dominated Forest (Black Ash)
- 33 • Rutting & Compaction
- 34 • Salvage Harvest
- 35 • Wetlands – mapped permanent, non-forest
- 36 • Wildlife Trees – Clearcut Silvicultural System
- 37 • Woodland Pools

38
 39 Areas of harvest blocks requiring additional residual to meet guidelines are shown on the FMP
 40 operations maps. These areas did not meet the guideline for 0.5 ha of residual forest in every 50ha
 41 hexagon. For blocks in moose emphasis areas, further work was done during FMP development
 42 to locate required residual patches. The location of these residual patches is shown on the AWS
 43 operations maps to guide their placement. In some cases, the residual patch has been placed

1 outside of the “low residual area” where the MNRF biologist determined that moose habitat needs
2 would be better served by retaining higher quality summer thermal cover near moose aquatic
3 feeding areas, consistent with the moose habitat objectives. For all other blocks, residual patch
4 placement will be determined during layout.

5
6 For the deer emphasis area, the following additional direction applies as per the FMP. If practical
7 and feasible, the block will be scheduled for harvest in the winter season. All bur oak will be
8 retained except where required to be cleared for road right-of-way. Operations will preferentially
9 retain mature white spruce, white pine and cedar as wildlife trees, priority given to retaining small
10 clumps of trees, as opposed to individual trees, if they occur.

11
12 The area of concern (AOC) prescriptions for lakes and streams allows for some limited harvesting,
13 as per the direction in the Forest Management Guide for Conserving Biodiversity at the Stand and
14 Site Scales (MNRF 2010) and applicable AOCs in Table FMP-11.

15
16 As a result of community input, harvest blocks within the Wabaseemoong Stewardship Area of
17 the Kenora Forest require additional retention levels of 36 leave trees per hectare, compared to the
18 requirement of 25 trees elsewhere. The additional leave tree requirements will not result in non-
19 compliance regarding utilization standards as the additional trees will be made up of dead trees or
20 trees which fall below the minimum acceptable standard found within the Forest Management
21 Guide for Conserving Biodiversity at the Stand and Site Scales.

22
23 **Areas available for Fuelwood** - Fuelwood is available at any approved FMP block. Fuelwood
24 from these areas includes cull wood brought to roadside or wood in slash piles. The public is to
25 obtain personal use fuelwood authorization from the MNRF prior to harvesting fuelwood.

26
27 Fuelwood will only be available if timber was not left on site for a specific reason. In all blocks,
28 timber will be left standing intentionally to enhance wildlife habitat and natural disturbance
29 patterns and will be unavailable for fuelwood. No fuelwood will be considered available within a
30 block once renewal activities have commenced, or after a period of two years after harvest
31 operations have ended. This strategy is intended for the protection of regenerating trees, whether
32 they were initiated naturally or artificially.

33
34 An index map (1:200,000 scale) and detailed operations maps (1:20,000 scale) of harvest areas are
35 found in the submission folder labeled as per the Forest Information Manual (FIM) Technical
36 Specification requirements and made available on the Natural Resources Information Portal
37 (NRIP) website.

39 **3.2.1 WOOD STORAGE YARDS**

40 There is a wood storage yard identified for this AWS. This wood storage yard is located on the
41 Cygnet Lake Road and will be used if required to facilitate moving winter wood from the end of
42 the Cygnet Lake Road.

1 **3.2.2 RENEWAL AND MAINTENANCE**

2 Renewal, tending and protection operations within the Kenora Forest scheduled for the 2023-2024
3 period are shown on the index and operations maps. The operations maps show gross areas for
4 renewal and tending. Activities scheduled for 2023-2024 include mechanical site preparation,
5 seeding, tree planting, and slash pile burning.

6
7 There is no mechanical site preparation program planned on the Kenora Forest for the 2023-2024
8 AWS. If a site preparation program is proposed at a later date, it will be added through a revision
9 to the AWS.

10
11 The tree planting program consists of planting approximately 157,080 seedlings on both site
12 prepared and non-site prepared ground. This AWS identifies 296 hectares for planting. Seedlings
13 are black spruce and jack pine container stock (309 and 207 size - a.k.a. minis), red pine container
14 stock (309 size) and white spruce container stock (309 and 412A size).

15
16 A tending program is not currently scheduled for the 2023-2024 operating period. If a program is
17 proposed at a later date, it will be added to the AWS through a revision.

18
19 There are approximately 46 hectares prescribed for seeding in this AWS. Previously harvested
20 areas that are not planted or seeded will be left to regenerate naturally. The area naturally
21 regenerated will be included in subsequent annual reports following Forest Operations Prescription
22 (FOP) verification.

23
24 Slash piles created in blocks harvested between 2020-2023 and any areas not burned during the
25 2023 Low Complexity Prescribed Burn Plan will be included in the Low Complexity Prescribed
26 Burn Plan for the fall 2023. The slash pile burning program will be completed as per direction in
27 the FMP. Once exact site locations and hectares are known, following submission (target
28 submission of July 15th) and approval of the 2023-2024 Low Complexity Prescribed Burn Plan, it
29 will be appended to this AWS.

30
31 In addition to the areas identified for renewal activities, all areas identified for harvest are eligible
32 for renewal and tending activities.

1 **3.2.3 ROADS**

2 The following primary and branch roads are identified for construction in this AWS;
3 Atik Road, Atik-Oonse Road, Avalon Road, Bays Lake Road, Cedartree Road, Dewar Road,
4 Flapjack Road, Flora Lake Road, Hidden Lake Road, India Road, Namego Lake Road, Quida Lake
5 Road, Roxy Road, Turtle Lake Road, Weisner Lake Road, and Westway Road. The amount of
6 construction on any road will be dependent on markets and overall budgets.

7
8 Operational and winter roads will be constructed within harvest areas and operational road
9 boundaries for short-term use. Operational road boundaries are shown on the operations maps.
10 Operational maps also indicate areas where Forestry Aggregate Pits may be located outside of
11 harvest blocks and to indicate the general location of access into harvest blocks.

12
13 The Talbot Road has been identified for decommissioning in this AWS. The decommissioning of
14 this road was first identified in the 2012-2022 FMP and was carried forward to the 2022-2032
15 FMP to implement. A decommissioning plan will be created by Miisun and MNRF prior to any
16 decommissioning activities.

17
18 **3.2.3.1 Water Crossings**

19
20 The water crossings for the current year have been included in table AWS-1. All proposed water
21 crossings listed in table AWS-1 are shown on the 1:20,000 annual operations maps.

22
23 Miitigoog will obtain approval from MNRF for all bridges (temporary and permanent) prior to
24 their installation. Miitigoog will provide bridge design drawings and details in advance of bridge
25 construction and installation. If MNRF design drawings are being used, Miitigoog will specify
26 which design and dimensions are being used.

27
28 Unless specified in Tables AWS-1 or AWS-2, all water crossings will be constructed, maintained
29 and decommissioned in accordance with Appendix C – Water Crossing Standards for the Kenora
30 Forest.

31
32 **3.2.3.2 Other Crossings of Areas of Concern**

33
34 There will be roads constructed across an area of concern (not related to water crossings) within
35 this AWS. The most likely area of concerns to be crossed by a road are as follows; A01, HL1,
36 NG1, Tat, Tar, Tmb, Tnr, Tpt and Tst. Where a road is required to cross an area of concern Miisun
37 will work with MNRF to ensure the conditions within the area of concern prescription are met.

38
39 **3.2.3.3 Water Crossing Decommissioning**

40
41 The water crossings decommissioning for the current year have been included in table AWS-2.
42 All proposed water crossing decommissioning listed in table AWS-2 are shown on the 1:20,000
43 annual operations maps.

1 **3.2.3.4 Aggregates**

2
3 The existing Forestry Aggregate Pits that will be used for construction and maintenance of roads
4 during the year are identified on the AWS maps and coverage.

5
6 New Forestry Aggregate Pits may be added throughout the year within approved harvest blocks,
7 primary and branch road corridors, aggregate extraction corridors or operational road boundaries.

8
9 Aggregate pits no longer required will be rehabilitated. This will include aggregate pits established
10 during this AWS period. Aggregate pits for operational roads are often rehabilitated in the same
11 year they are created. There are currently no aggregate pits for which Category 9 permit application
12 will be prepared.

13
14 **3.2.3.5 Existing Roads**

15
16 Maintenance will occur on large portions of the existing primary and branch road systems. The
17 primary and branch roads identified in table FMP-18 of the Kenora Forest 2022-2032 Forest
18 Management Plan are eligible for funding in accordance with the Road Construction and
19 Maintenance Agreement.

20
21 These roads and each associated right-of-way are eligible to receive maintenance as required to
22 maintain the road for forest management purposes (e.g. active operations such as harvest, renewal,
23 tending, transportation and hauling activities), to minimize risk to road users and minimize the
24 potential risk for environmental damage. Routine maintenance may include either one or several
25 of the following activities where operations are working with the vicinity of the road: grading,
26 snowplowing, brush clearing with mechanical or chemical methods (e.g. application of herbicides
27 for vegetation control along road shoulder), gravelling, reshaping of road bed, ditching, surfacing,
28 bridge repair that involves above the water work, dust control, signage, sanding, erosion control,
29 water crossing repairs (using existing structure on site where no in-water work is involved as per
30 the fisheries protocol) and clearing existing right-of-ways including the harvesting of merchantable
31 trees as required. Maintenance may also include non-emergency repairs of existing water
32 crossings to clean culverts, remove blockages caused by beaver activity in and/or adjacent to
33 culverts and to apply material (e.g. rig rap, straw mats) to mitigate or enhance long-term erosion
34 protection around water crossings, bed and/or sub-grade rebuilding.

35
36 For safety/engineering concerns minor road re-alignment and bypass construction may also be
37 required for existing roads during the implementation of the FMP. This is permitted within the
38 existing 30m right-of-way, subject to the confirmation of values and the application of all
39 applicable AOCs to the proposed work area. If an appropriate AOC does not exist in the FMP
40 note that it will need to be amended into the FMP and then applied. Installation of new and/or
41 replacement of water crossings by the SFL are permitted subject to the conditions of the
42 MNRF/DFO water crossing protocol (Supp Doc O).

43
44 Emergency maintenance is defined as road maintenance that requires immediate attention to
45 restore access and reduce the chance of personal injury, damage to equipment, inconvenience to

1 road users and further road damage (2020 FMPM, Glossary-13). This damage may be caused by
2 unplanned events, significant weather, or failure of the structure. Emergency maintenance will be
3 necessary where public safety and/or environmental damage have occurred. Emergency
4 maintenance can proceed immediately without MNRF approval provided the emergency works
5 are limited in scope to only what is necessary to address essential public safety concerns and to
6 restrict further environmental damage. All emergency actions will be reported to MNRF as soon
7 as practical (immediately or next business day) and any further actions (e.g. restoration,
8 reconstruction, abandonment) will be subject to normal planning approvals and conditions of
9 MNRF/DFO Water Crossing Protocol (Supp Doc O). Where sediment has been released into a
10 watercourse, the Ministry of Environment, Conservation and Parks will be informed verbally
11 within 24 hours.

12
13 Access to areas could be disrupted at any time and there is no obligation on the Crown or the Forest
14 Industry to undertake repair work to restore infrastructure and access. However, all actions must
15 be consistent with the RUMS for the road. Situations could also arise where it is determined that
16 damaged/deteriorating infrastructure is unsafe and continued use must be prohibited until a
17 permanent solution is implemented.

18

1 **3.2.4 FIRE PREVENTION AND PREPAREDNESS**

2 The forest fire prevention and preparedness measures described in Section 4.8 of the FMP will
3 apply to the entire management unit and all licensees.

4
5 It is the policy of Miitigoog to take all reasonable precautions to prevent forest fires during the
6 course of its operations and to take immediate action to minimize losses should fire occur on or
7 near its operations. Miitigoog, its contractors and overlapping licensees will work in close liaison
8 and co-operation with the Ministry of Natural Resources and Forestry in the prevention, detection,
9 and suppression of forest fires.

10
11 Appendix B *2023-2024 Miisun Fire Plan* goes into greater detail on the requirements for all
12 contractors, and will be distributed to each of them. It is the responsibility of Miitigoog, its
13 contractors and overlapping licensees to understand and comply with the *Forest Fires Prevention*
14 *Act* and the Modifying Industrial Operations Protocol.

15
16 To enhance the compliance and understanding of fire prevention the following measures are
17 implemented:

- 18
19 (a) Daily communication detailing fire activity and fire hazard is carried out with all
20 contractors and overlapping licensees.
21 (b) Miitigoog/Miisun field personnel or consultants conduct periodic fire inspections on
22 mechanical equipment and forest fire suppression equipment at each operation to assure
23 compliance with the *Forest Fires Prevention Act* and company standards.
24 (c) Patrols of public use areas and after lightning events (during extreme conditions) will
25 be conducted by Miitigoog/Miisun in conjunction with operations where they overlap.

26
27 Personnel in harvesting and site preparation operations will be trained to the SP-102 Industry
28 certification. Trainees will be instructed by qualified persons (as deemed so by MNRF and Miisun)
29 covering the two-day induction for new employees and a one-day refresher course for previously
30 trained personnel. All sub-contractors (planting, thinning, ground spray) will be trained by their
31 respective contractors to a competent level of fire knowledge based on the fire equipment in their
32 operations.

33
34 As per the *Forest Fires Prevention Act* and the Modifying Industrial Operations Protocol,
35 Miitigoog, its contractors and overlapping licensees will be considered: 1) trained and capable, or
36 2) limited operators.

37
38 If an overlapping licensee would like to be considered trained and capable, the licensee must
39 provide a completed Kenora Forest Independent Operator / Contractor Fire Information form to
40 Miitigoog prior to April 1, 2023. Miitigoog will forward any completed forms to the MNRF so
41 the appropriate classification is made.

42
43 The following table describes the fire suppression equipment that will be available and maintained
44 where operations are occurring.

1

Operations	Number of Machines	Number of Equipment Caches	Backpack Pumps*
Heavy equipment with tire chains, tracks, working in forest fuels	1-5	0	1/machine
	6+	1	
OR**: Heavy Equipment at work within a 10km radius of each other (includes hot work)	1-9	0	1/machine or hot work operation
	10+	1	
Tree plant, manual tending or other labour-intensive operations		0	1 for every 4 workers, to a maximum of 10/site

2 *A serviceable pressurized *water delivery system* located on a machine can replace a backpack
3 pump.

4 **Only one fire equipment cache will be required on site, providing it is within 20 minutes (by
5 ground transportation) of all equipment.

6

1 **3.2.5 MONITORING AND ASSESSMENT**

2 **3.2.5.1 Compliance Monitoring**

3 The compliance strategy for the Kenora Forest is located in section 4.7 Monitoring and Assessment
4 of the Kenora Forest 2022-2032 FMP.

5
6 Inspection and Sampling Intensity

7
8 Miisun compliance inspectors must inspect a representative sample within each Compliance
9 Reporting Area (CRA) to confirm and report on the compliance status with the FMP, AWS, and
10 associated legislation. This will include such things as utilization standards, harvest boundaries,
11 areas of concern, forest aggregate pits and water crossing requirements. Occasionally, joint
12 inspections may be conducted with the MNRF.

13
14 Reporting and Operational Issue Management

15
16 As described in the FMP, section 4.7.1.6, any operational issues are to be reported immediately by
17 forest workers to their supervisors. If an operational issue can easily be corrected, it must be done
18 immediately. On-going or non-correctable operational issues are to be verbally reported to Miisun,
19 who will in turn notify the MNRF.

20
21 A compliance inspection report will be completed by a compliance inspector who has conducted
22 the inspection and submitted to MNRF through FOIP. An inspection report is a record of the
23 inspection that was conducted at a point in time on a defined area and creates a history. The report
24 is not considered to have been submitted through FOIP until it has been completed by the
25 inspector, entered in FOIP, and approved within FOIP.

26
27 Notification of the Status of an Operation

28
29 Notification and inspection reporting timelines and requirements are described in section 4.7.1.6
30 of the Kenora Forest 2022-2032 FMP.

31
32 Miisun will provide written notice (email) to MNRF when a change in the status of an operation
33 on the Kenora Forest occurs. The notice will state the 'Compliance Reporting Area' and the type
34 of notification; 'Start Up', 'Suspended', or 'Complete'.

35
36 Inspection and Report on Operations

37
38 The inspection process will be initiated by Miisun as soon as forest operations commence.
39 Compliance inspection report procedures on the Kenora Forest will follow direction from the
40 Forest Compliance Handbook procedure FOR 07 03 05. The procedure provides a flow chart
41 outlining the process that will be used when confronted with issue management.

42
43 Prevention, Avoidance and Mitigation

1
2 Prevention, avoidance and mitigation measures will be implemented as documented in section
3 4.7.1.7 of the Kenora Forest 2022-2032 FMP.

4
5 Roles and responsibilities associated with the compliance plan are identified in section 4.7.1.5 of
6 the Kenora Forest 2022-2032 FMP.

7
8 The Annual Reports will describe the details of specific compliance performance issues and any
9 action items carried out.

10
11 Also, when mitigative measures (i.e. AOC prescriptions) are being identified in the field (i.e.
12 flagged boundary), overlapping licensees who are involved are to ensure the value location in the
13 field is known to ensure appropriate protection is provided.

14 15 **3.2.5.2 Compliance Reporting Area(s)**

16 Compliance Reporting Areas are determined by risk analysis, as documented in section 4.7.1.8 of
17 the Kenora Forest 2022-2032 FMP.

18
19 For the purpose of this Forest Compliance Strategy, a Compliance Reporting Area is defined as:
20 “areas of land described for the purpose of forest compliance reporting and for which a forest
21 operation compliance inspection report will be submitted.” (Source: FOR 07 02 04). The
22 Compliance Reporting Areas are documented in Appendix A of this AWS.

23
24 Silviculture areas will be grouped by the type of activity (i.e. tree plant, site preparation, etc.) and
25 reported in one FOIP report as a single activity. Each water crossing installation will be reported
26 individually in FOIP.
27

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APPENDIX A

2023-2024

COMPLIANCE REPORTING AREAS

KENORA FOREST

Compliance Reporting Area	Harvest Blocks	Likelihood Rating	Capability Rating	Risk Assessment	Report
CAR-1	22.598	N/A	High	High	Report
CAR-2	12.058	N/A	High	High	Report
CAR-3	22.600	N/A	High	High	Report
CAR-4	12.704, 12.499, 12.059, 12.061	N/A	High	High	Report
CAR-5	12.125, 12.701	N/A	High	High	Report
CAR-6	22.601, 22.809	N/A	High	High	Report
CAR-10	22.392	N/A	High	High	Report
CAR-11	22.394, 22.393, 22.395	N/A	High	High	Report
CAR-12	22.396, 22.397	N/A	High	High	Report
CAR-13	22.398	N/A	High	High	Report
CAR-14	22.399	N/A	High	High	Report
CAR-15	22.400	N/A	High	High	Report
CAR-16	22.403, 22.404	N/A	High	High	Report
CAR-17	22.311, 22.313, 22.314	N/A	High	High	Report
CAR-18	22.285, 22.284, 22.286, 22.287, 22.288	N/A	High	High	Report
CAR-21	22.343	N/A	High	High	Report
CAR-22	22.364, 22.363	N/A	High	High	Report
CAR-23	22.432, 22.433	N/A	High	High	Report
CAR-24	22.430	N/A	High	High	Report
CAR-25	22.429	N/A	High	High	Report
CAR-26	22.441	N/A	High	High	Report
CAR-27	22.439, 22.438, 22.436	N/A	High	High	Report
CAR-29	22.459	N/A	High	High	Report
CAR-30	12.903	N/A	High	High	Report
CAR-31	22.458	N/A	High	High	Report
CAR-32	22.451, 22.452	N/A	High	High	Report
CAR-33	22.453	N/A	High	High	Report

CAR-34	22.450	N/A	High	High	Report
CAR-35	22.454	N/A	High	High	Report
CAR-37	22.488	N/A	High	High	Report
CAR-38	22.832	N/A	High	High	Report
CAR-49	22.495, 22.496	N/A	High	High	Report
CAR-50	22.492	N/A	High	High	Report
CAR-51	22.498	N/A	High	High	Report
CAR-52	22.501, 22.502, 22.503	N/A	High	High	Report
CAR-53	22.500	N/A	High	High	Report
CAR-58	22.506, 22.507	N/A	High	High	Report
CAR-59	22.508	N/A	High	High	Report
CAR-60	12.021	N/A	High	High	Report
CAR-61	12.536, 12.023	N/A	High	High	Report
CAR-62	22.561	N/A	High	High	Report
CAR-63	22.531, 22.532	N/A	High	High	Report
CAR-64	22.533	N/A	High	High	Report
CAR-65	22.534	N/A	High	High	Report
CAR-66	22.537	N/A	High	High	Report
CAR-67	22.535	N/A	High	High	Report
CAR-68	22.536	N/A	High	High	Report
CAR-69	22.538	N/A	High	High	Report
CAR-70	22.559	N/A	High	High	Report
CAR-71	22.558	N/A	High	High	Report
CAR-72	22.560	N/A	High	High	Report
CAR-73	22.565, 22.564	N/A	High	High	Report
CAR-74	22.569	N/A	High	High	Report
CAR-75	22.568	N/A	High	High	Report
CAR-76	22.566	N/A	High	High	Report
CAR-77	12.271	N/A	High	High	Report
CAR-78	12.653	N/A	High	High	Report
CAR-79	12.223	N/A	High	High	Report

CAR-80	12.258	N/A	High	High	Report
CAR-81	22.009	N/A	High	High	Report
CAR-82	22.010	N/A	High	High	Report
CAR-83	22.036	N/A	High	High	Report
CAR-84	22.035	N/A	High	High	Report
CAR-85	22.497, 22.499	N/A	High	High	Report
CAR-86	22.025	N/A	High	High	Report
CAR-87	22.026	N/A	High	High	Report
CAR-88	22.044	N/A	High	High	Report
CAR-89	22.043	N/A	High	High	Report
CAR-90	22.063	N/A	High	High	Report
CAR-91	22.056	N/A	High	High	Report
CAR-92	22.754	N/A	High	High	Report
CAR-93	22.061	N/A	High	High	Report
CAR-94	22.058	N/A	High	High	Report
CAR-95	22.060	N/A	High	High	Report
CAR-96	22.065	N/A	High	High	Report
CAR-97	22.067	N/A	High	High	Report
CAR-98	22.066	N/A	High	High	Report
CAR-99	22.105	N/A	High	High	Report
CAR-100	22.103	N/A	High	High	Report
CAR-101	22.089, 22.088	N/A	High	High	Report
CAR-102	22.087, 22.086	N/A	High	High	Report
CAR-103	22.766	N/A	High	High	Report
CAR-104	22.765	N/A	High	High	Report
CAR-105	22.764	N/A	High	High	Report
CAR-106	22.763, 22.761, 22.760, 22.762	N/A	High	High	Report
CAR-107	22.193	N/A	High	High	Report
CAR-108	12.255	N/A	High	High	Report
CAR-109	12.244	N/A	High	High	Report

CAR-110	22.768	N/A	High	High	Report
CAR-111	12.243	N/A	High	High	Report
CAR-113	12.317	N/A	High	High	Report
CAR-114	12.473	N/A	High	High	Report
CAR-115	12.476	N/A	High	High	Report
CAR-116	12.901	N/A	High	High	Report
CAR-117	22.027, 22.028	N/A	High	High	Report
CAR-118	22.041	N/A	High	High	Report
CAR-119	22.042	N/A	High	High	Report
CAR-120	22.045	N/A	High	High	Report
CAR-121	22.189, 22.190, 22.191, 22.192	N/A	High	High	Report
CAR-122	22.283	N/A	High	High	Report
CAR-123	22.289	N/A	High	High	Report
CAR-124	22.310	N/A	High	High	Report
CAR-125	22.315	N/A	High	High	Report
CAR-126	22.345	N/A	High	High	Report
CAR-127	22.346	N/A	High	High	Report
CAR-128	22.347	N/A	High	High	Report
CAR-129	22.348	N/A	High	High	Report
CAR-130	22.349	N/A	High	High	Report
CAR-131	22.350	N/A	High	High	Report
CAR-132	22.361	N/A	High	High	Report
CAR-133	22.362	N/A	High	High	Report
CAR-134	22.381	N/A	High	High	Report
CAR-135	22.382	N/A	High	High	Report
CAR-136	22.383	N/A	High	High	Report
CAR-137	22.384	N/A	High	High	Report
CAR-138	22.385	N/A	High	High	Report
CAR-139	22.386	N/A	High	High	Report
CAR-140	22.387	N/A	High	High	Report

CAR-141	22.388	N/A	High	High	Report
CAR-142	22.389	N/A	High	High	Report
CAR-143	22.390	N/A	High	High	Report
CAR-144	22.391	N/A	High	High	Report
CAR-145	22.406	N/A	High	High	Report
CAR-146	22.437	N/A	High	High	Report
CAR-147	22.440	N/A	High	High	Report
CAR-148	22.493	N/A	High	High	Report
CAR-149	22.494	N/A	High	High	Report
CAR-150	22.523	N/A	High	High	Report
CAR-151	22.539	N/A	High	High	Report
CAR-152	22.540	N/A	High	High	Report
CAR-153	22.541	N/A	High	High	Report
CAR-154	22.542, 22.543	N/A	High	High	Report
CAR-155	22.552	N/A	High	High	Report
CAR-156	22.562	N/A	High	High	Report
CAR-157	22.750	N/A	High	High	Report
CAR-158	22.780	N/A	High	High	Report
CAR-159	22.797	N/A	High	High	Report
CAR-160	22.808	N/A	High	High	Report
CAR-161	22.834	N/A	High	High	Report
CAR-162	22.836	N/A	High	High	Report
CAR-163	22.837	N/A	High	High	Report
CAR-164	22.839	N/A	High	High	Report
CAR-165	22.840	N/A	High	High	Report
CAR-166	22.844, 22.845	N/A	High	High	Report
CAR-167	22.849	N/A	High	High	Report
CAR-168	22.858	N/A	High	High	Report
CAR-169	22.859	N/A	High	High	Report
CAR-170	22.860	N/A	High	High	Report
CAR-171	22.888	N/A	High	High	Report

CAR-172	22.308	N/A	High	High	Report
CAR-173	22.351	N/A	High	High	Report
CAR-174	22.43	N/A	High	High	Report

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APPENDIX B

2023-2024 MIISUN FIRE PLAN

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2023-2024 MIISUN FIRE PLAN

DECLARATION

The following Fire Plan has been prepared for the year 2023 fire season (April 01 to October 31), within the 2023-2024 AWS planning period.

Contractors are responsible for abiding by the conditions and requirements as outlined in this plan, unless the Contractor has an MNRF approved Fire Prevention & Preparedness Plan (FP&PP) of their own to cover their operations.

In the interest of fire prevention and preparedness the Crown staff may, at any time and at their discretion, impose upon any operations or activities covered under this plan:

Additional modifications relating to woodlands operations, above and beyond those that may be required as per the Modifying Industrial Operations Protocol and / or

Additional requirements with respect to fire suppression equipment, training and overall fire preparedness

1 **Table of Contents**

2 1.0 INTRODUCTION11

3 2.0 SCOPE.....11

4 3.0 FIRE POLICY.....11

5 4.0 FIRE PREVENTION11

6 5.0 FIRE AWARENESS AND EDUCATION.....13

7 6.0 FIRE PREPARDNESS TRAININNG.....13

8 7.0 FIRE DETECTION13

9 8.0 EQUIPMENT & TRAINING STANDARDS - LIST FOR THE KENORA FOREST.....14

10 9.0 COMMUNICATIONS.....14

11 10.0 AREAS OF OPERATION.....14

12 APPENDIX A – ONTARIO MINISTRY OF NATURAL RESOURCES AND FORESTRY CONTACT

13 INFORMATION16

14 APPENDIX B – INDUSTRY CONTACT INFORMATION17

15 APPENDIX C – MODIFYING INDUSTRY OPERATIONS PROTOCOL18

16 APPENDIX D - FOREST FIRE OPERATIONS BY FOREST INDUSTRY – BUSINESS PRACTICES.....20

17 APPENDIX E - FIRE DETECTION REPORT- FORM.....25

18 APPENDIX F - RETRIEVAL OF COMPANY/CONTRACTOR FIRE EQUIPMENT BY MNRF.....26

19 APPENDIX G - KENORA FOREST INDEPENDENT OPERATOR / CONTRACTOR FIRE INFORMATION...27

20 APPENDIX H - CONTRACTOR EQUIPMENT RATES.....31

21

22

1 **1.0 INTRODUCTION**

2
3 All forest operations undertaken in Ontario must be performed with careful consideration to the prevention
4 of forest fires. Accidental wildfire can have a considerable impact on both short term and long-term forest
5 operations and forest sustainability. In the incidence of accidental fire, operators must be prepared to safely
6 take initial action to prevent fire spread. Under the authority of the *Forest Management Planning Manual*
7 and the Crown Forest Sustainability Act, conditions are placed on forest operations through the Annual
8 Work Schedule (AWS) to provide Forest Fire Prevention and Preparedness. Contractors shall follow these
9 guidelines to develop and describe conditions for forest operations which will prevent forest fires and/or
10 will minimize damage from a fire, should one occur. Forest operators must also be aware of other prevention
11 measures in the Forest Fires Prevention Act and associated regulations, Modifying Industrial Operations
12 Protocol, Forest Fire Operations By Forest Industry – Business Practices”, and the Crown Forest
13 Sustainability Act, Part B: Annual Operations
14

15 **2.0 SCOPE**

16
17 Forestry operations are illustrated on a variety of maps, available from the Company, SFL holders or
18 MNRF District offices.
19

20 **3.0 FIRE POLICY**

21
22 Contractors are to take all necessary precautions to prevent forest fires during the course of its operations;
23 to detect, report, and where possible take immediate initial suppression action to minimize any loss
24 resulting from forest fires. Every reasonable attempt will be made to take action on fires on or near the
25 Company’s operating areas, to remain on site until the fire is considered to be out *or* until relieved by the
26 MNRF *or* the situation becomes too dangerous to handle with the available level of skill and/or training.
27

28 **4.0 FIRE PREVENTION**

29
30 Contractors will utilize the information provided in the Modifying Industrial Operations Protocol to
31 modify operations for the next day. When determining what modifications may be applicable for a
32 particular operation, the closest operating weather station will be used as a default. If another weather
33 station (other than the closest) is to be used to determine the modification(s) for a particular operation,
34 this must be identified and agreed upon by the local Fire Management Headquarters and Company
35 personnel prior to operations commencing.
36

37 Forestry Operations personnel will comply with the relevant regional or provincial guidelines for
38 *Modifying Industrial Operations* based on the fire danger, the Forest Fires Prevention Act (FFPA) and the
39 *Forest Fire Operations by Forest Industry – Business Practices*. Operations staff will be responsible for
40 determining the danger classification, as per the modification guidelines. Each operation will follow the
41 guidelines as they relate to their operation, and any required modifications to forest operations will be
42 relayed to the relevant personnel by Operations staff.

1 A number of Fire Prevention and Fire Hazard signs are maintained throughout the district, which are an
2 effective tool for advising staff, as well as other forest users, of the local fire conditions on any given day.
3 During periods of high fire danger, Company staff will conduct patrols of the operating area including,
4 wherever possible, public use areas such as major access points and camping sites. Staff may also conduct
5 patrols of operating areas after significant lightning events, to aid in the detection of any fire starts.
6

7 Fire related inspections and audits of operations will continue throughout the fire season to ensure
8 compliance with the AWS, FFPA & Regulations and Company policy. Any deficiencies found will be
9 addressed, and noted in Forest Operation Inspection Program (F.O.I.P) as quickly as possible and may
10 result in immediate corrective action(s) and/or a self-imposed shutdown of the activity in question. Fire
11 suppression equipment may be removed from machinery or equipment while not being operated. As the
12 fire hazard increases, Company staff will increase fire prevention and preparedness levels.
13

14 **4.1 Fire Prevention Rules**

- 15
- 16 1) Abide by the "No Smoking" rule. "No person shall smoke while walking or working in a forest
17 woodland during the fire season".
- 18 2) No person shall throw or drop, in or within 300 meters of a forest or woodland:
 - 19 a) A lighted match, cigarette, cigar or other smoking material;
 - 20 b) Live coals, or;
 - 21 c) Hot ashes.
- 22 3) No person shall use or operate in or within 300 meters of a forest or woodland- any burner,
23 chimney, engine, incinerator or other spark-emitting outlet that is not provided with an adequate
24 device for arresting sparks.
- 25 4) A person who operates equipment or machinery involved in forest operations or the processing of
26 forest resources in a forest or woodland during the fire season shall keep a fire extinguisher on the
27 equipment or machinery or within five meters from it. The extinguisher must be a dry chemical
28 extinguisher, in serviceable condition with a minimum rating of 6A:80B:C.
- 29 5) A person who operates equipment or machinery involved in forest operations or the processing of
30 forest resources in a forest or woodland during the fire season must also comply with the
31 minimum suppression equipment requirements, as outlined in FFPA.
- 32 6) A person who operates a power saw in a forest or woodland during the fire season:
 - 33 a) Shall not start the saw within 3 meters of the place where it is fuelled;
 - 34 b) Shall not place the saw on flammable material(s);
 - 35 c) Shall keep available, as a minimum, a serviceable dry chemical ABC type fire
36 extinguisher of at least 225 grams.
- 37 7) All exhaust systems must have an adequate device for arresting sparks, to prevent burning carbon
38 from coming in contact with forest fuels.
- 39 8) Heavy equipment / machinery, when not in use, are to be left in an area that is free of flammable
40 material.
- 41 9) All heavy equipment are to be checked daily for any accumulation of flammable
42 material and any accumulation found is to be removed and disposed of safely.
- 43 10) All welding is to be carried out on a site cleared to mineral soil, to a minimum of 3 meters in all
44 directions from the point of welding, and at least 1 full / serviceable backpack pump, 1 axe, 1
45 shovel and 1 serviceable dry chemical fire extinguisher, with a rating of at least 6A:80B: C, is to
46 be readily available. Fire watch should be maintained during welding operations.
- 47 11) Organize crews and assign key personnel duties that they are qualified to perform, maintain an
48 active list of personnel and suppression training (SP-102), functions they shall perform in the
49 event of a fire.

- 1 12) Serviceable firefighting equipment must be available for immediate use throughout the fire
2 season, as required.
- 3 13) Ensure that regular and frequent fire prevention inspections are conducted including equipment,
4 work sites, fire suppression equipment, personnel and campsites.
- 5 14) Ensure that workers know the location of the nearest fire cache and phone, as well as the contact /
6 reporting numbers for the MNRF and the Company.
- 7 15) Ensure that workers are knowledgeable as to the location of water sources within their particular
8 area of operation.
9

10 **5.0 FIRE AWARENESS AND EDUCATION**

- 11
- 12 (a) The daily message will be utilized on the Kenora Forest. The MNRF Modifying Industrial
13 Operations Protocol will be the source for modification information.
- 14 (b) Contractor Principals/Owners are expected to call after 1500 (3:00pm) to the MNRF Modifying
15 Industrial Operations Protocol Hotline at the **Kenora Fire Management Headquarters** (800-
16 465-5311) or use website ([https://www.ontario.ca/environment-and-energy/fire-intensity-
17 codes#section-3](https://www.ontario.ca/environment-and-energy/fire-intensity-codes#section-3)) on a daily basis during fire season for information on the hazard rating, codes
18 and recommended practices.
- 19 (c) Contractors Principals/Owners will inform their Supervisor of prevention and implementation
20 plans prior to shift.
- 21 (d) Contractor Supervisors will inform employees of prevention plans and their implementation -
22 prior to work commencement.
23

24 **6.0 FIRE PREPARDNESS TRAINING**

25

26 Personnel in harvesting and site preparation operations will be trained to the SP-102 Industry
27 Certification with refresher training required every four years (see Appendix G). Planting and Manual
28 Tending operations will be trained by their respective Contractors to a competent level of fire knowledge
29 based on the fire equipment in their operations. The Company will strive to ensure that all operations
30 meet the criteria for “trained and capable” designation, including the requirement that at least 25% of the
31 workers on any particular site be trained to a minimum SP-102 standard. Operations that are unable to
32 satisfy all of the “trained and capable” criteria will be considered as “limited”.
33

34 **7.0 FIRE DETECTION**

35

36 When employees/supervisor locate a forest fire they will:

37

- 38 1) If safe to do so extinguish or contain the fire to the best of their ability and resources on hand.
39 2) Report the fire directly to: Kenora Fire Management Headquarters SRO Line (807) 548-5837 or 310-
40 FIRE(3473).
41 3) Report the fire to Company Personnel.
42

43 The following information is to be provided:
44

- 1 1. YOUR NAME (and # where you may be contacted)
- 2 2. LOCATION of fire (preferably UTM Basemap & block number)
- 3 3. CONDITION OF FIRE
- 4 4. FUEL TYPE
- 5 5. SIZE
- 6 6. VALUES
- 7 7. ACTION TAKEN

8
9 Reference will be made to the *Forest Fire Operations by Forest Industry – Business Practices*, to address
10 such matters as:

- 11 Hiring rates
- 12 Conditions for the use of Company personnel
- 13 Conditions for the use of Company equipment
- 14 Working relationship, and the transition of responsibility, between the Company and MNRF
- 15 Compensation to which the Company may be entitled

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17

18 **8.0 EQUIPMENT & TRAINING STANDARDS - LIST FOR THE KENORA FOREST**

19

20 Each Independent Operator is responsible to have the minimum Forest Fire Suppression Equipment
21 available and maintained, as per F.F.P.A. Regulations (Section 3.3).

22

23 **9.0 COMMUNICATIONS**

24

25 A comprehensive communication plan must address ability to call out and be able to receive messages.
26 Options currently available to users of the Kenora Forest are:

27

- 28 i) 24-hour response line
- 29 ii) Telephones
- 30 iii) Satellite phones
- 31 iv) Cellular phones
- 32 v) Radio phones
- 33 vi) FAX
- 34 vii) E-mail
- 35 viii) Two-way FM radios

36

37 **10.0 AREAS OF OPERATION**

38

39 During the annual spring fire meeting between the Company and MNRF, maps showing the
40 Company's intended areas of operation will be reviewed and made available to MNRF Fire
41 Managers - in digital format. If at any time throughout the fire season additional copies of maps are
42 required, please direct requests to the Forester, or the primary/alternate contact for the given operating
43 area, as listed in this plan.

44

1 The following items should be considered for discussion during the annual spring fire meeting:

- 2
- 3 Operating schedule, by block (harvest & silviculture)
- 4 Forest composition, fuel types of the operating areas
- 5 Risk classification
- 6 Scale of operation
- 7 Type of equipment
- 8 Class of operation (Trained & Capable or Limited)
- 9 Modifying Industrial Operations Protocol review
- 10 Weather stations
- 11 Communication strategy
- 12 Values (priorities)
- 13 Road maintenance and development
- 14 Forestry camps (location, fuel caches, values)
- 15

16 **11.0 COMPANY RESOURCES – Requisition & Transfer**

17

18 **Resource Requests**

19 To request Company resources, please contact primary and or provide all alternate Company personnel as
20 listed within *Appendix B – Company Contacts* -Transferring of Company Resources

21 Anytime that the MNRF wishes to assume care and control of Company equipment and resources, which
22 would result in absence of direct Company involvement, the transferring of said equipment and resources
23 should be documented in writing in a manner that would provide both the Company and the MNRF with
24 an itemized hard copy of the details of the transfer. The MNRF *Transfer Record of Equipment and*
25 *Supplies Loaned (“195”)* form will be used.

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27 See appendix D for Forest Industry Protocol

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1 **Appendix A – Ontario Ministry of Northern Development, Mines, Natural Resources and**
 2 **Forestry Contact Information**

3
 4 **Kenora Fire Management Headquarters** **1-807-548-1919**
 5 **MNRF Modifying Industrial Operations Protocol (MIOP)** **1-800-465-5311**
 6 **MNRF MIOP – Sat Phone Users** **1-807-548-1423**
 7 **24-Hour Forest Fire Reporting Line** **310-FIRE (3473)**
 8 **24-Hour Forest Fire Reporting Line - Sat Phone Users** **1-807-937-5261**
 9 **Sector Response Officer (S.R.O)** **1-807-548-5837**

10

	WORK	HOME	CELL	POSITION
Pat Harvey	(807) 548-5720	(807) 464-2450	(807) 467-1297	Fire Management Supervisor
Ben Wilkinson	(807) 548-8416		(807) 407-8255	Fire Operations Supervisor
John Mash	(807) 548-6195	(807) 464-0754	(807) 464-0754	Fire Operations Supervisor
Kyle Myschowoda	(807) 468-2559			Management Forester
Scott McAughey	(807) 468-2517			Resources Management Supervisor

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 14
 15

1 **Appendix B – Industry Contact Information**

2 COMPANY CONTACTS

Company Contacts	Contact	Phone #	Fax #
Miitigoog	Erik Holmstrom	464-0025 (cell)	
Miisun Integrated Resource Management	Shannon Rawn	467-3551 ext. 1 464-0066 (cell)	
	Kurt Pochailo	467-3351 ext. 2 466-3802 (cell)	
	Donna Puls	467-3551 ext. 3	

3

Contractors / Licensees	Contact	Phone #	Fax #
Clarke Anderson	Clarke Anderson	548-5241	
Dave Burt General Contracting Ltd	Dave Burt Jr	464-1030	
Devlin Timber Co. (1992) Ltd.	Mark Scott Howie Adams	543-7676 (w) 543-3276 (h) 547-2941 (h)	543-7667
1506705 Ontario Inc	Willy Mowe	548-5977	548-1826
Wabaseemoong	Waylon Scott	927-2000	927-2037
Russell Banning	Russell Banning	548-7663	
Nakka Logging	Tyler Nakka	407-9663	
Gerrald Ross Logging	Gerrald Ross	466-3206	
Shoal Lake #39	Gerald Lewis	733-2560	
W5 Logging Ltd.	Dave Witzke	467-7789 (Cell)	
Dorsey Contracting	Mark Illott	548-8785 467-0540 (Cell)	548-8789
Doug Riffel Harvesting	Doug Riffel	529-3026 221-6019 (Cell)	
	John Meek	221-6033(Cell)	
Weyerhaeuser	Matt Wilkie	548-7142 466-3097 (Cell)	548-7200
Derouard Trucking	Lawrence Derouard	466-1648	

Additional silviculture contractor contact numbers will be made available if working on forest.

Appendix C – Modifying Industry Operations Protocol

The Modifying Industrial Operations Protocol is broken into six keys (Appendix H). These keys will determine the degree of fire risk for each operation and site, and the level of forest operations modifications (restrictions) required. An actual field verification done prior to or at the time of operations will take place at the work site for that day. This will then guide the operations to the level of work modification that will be required. The keys account for leaf off and leaf on conditions in addition to the following:

Spring/Summer Conditions:

The following daily activities may be implemented based on the Protocol:

- High risk operations being moved to medium or low risk sites.
- Short shifting part or all operations as conditions require. “SS = Short Shift Operations are not permitted between 12:00 and 19:00, local daylight savings time. Prevention measures still apply and a dedicated patrol*of the area must be carried out for one hour after operations shut down.”
- Consolidating operations where practical.
- Suspending part or all Kenora Forest Operations as conditions require.
- Implementation of Patrols and Fire Watch.

The Modifying Industrial Operations Protocol are implemented in the following sequence:

- The Modifying Industrial Operations Protocol is monitored on a daily basis.
- Forest operators are notified as to increasing conditions.
- Modifying Industrial Operations Protocol Charts are consulted to see what modifications apply.
- Direction to modify (move equipment to lower risk sites, shutdown, modified work hours, short shift, extra patrols, staff advisories) are considered by Company and Ministry fire management personnel.
- Considerations must be made as to “limited operators” (untrained) and to trained and capable operators.

6.1.1. Low to Moderate Fire Hazard:

- Normal operations will be carried out with the Modifying Industrial Operations Protocol reviewed daily with concern for high risk sites and operations.
- Forest fire suppression equipment as per F.F.P.A. Regulations, and Section 3.3 will be on site at operations.
- Chain Saw and Brush Saw Operators will have a dry chemical fire extinguisher readily available during the fire season. This extinguisher will be either on their person or at their power saw fueling site.
- Mechanical equipment will have serviceable dry chemical fire extinguishers mounted on the machine as per the Company's Fire Protection Plan. Pack pumps will be located on each machine or work site.
- Mechanical equipment will be washed at the beginning of the fire season and regularly as required.
- Forest debris will be removed from mechanical equipment as required, but at least at the end of the shift.
- Mechanical equipment will be parked on mineral soil as per company fire standards 30m apart for all large harvesting equipment.
- Master switches will be in the “OFF” position when the machine is parked.

6.1.2. High and Very High Fire Hazard:

- Supervisors remind their employees daily of the increase in the fire hazard.

- 1 Supervisors check power saws and mechanical equipment under their control daily to assure that a fire
- 2 hazard does not exist.
- 3 Supervisors are to increase their efforts to assure that Company regulations pertaining to fire prevention
- 4 and preparedness are being carried out.
- 5 Supervisor will check fire equipment and caches for location and readiness.
- 6 Utilizing patrols and fire watch crews as needed, a minimum of **one hour** after operations end.
- 7 Short shifting or suspending part or all operations based on the Modifying Industrial Operations
- 8 Protocol in consultation with the MNRF.

1 **Appendix D - Forest Fire Operations by Forest Industry – Business Practices**

2
3 **PURPOSE**

4
5 To ensure consistent operations with all forest management licensees and companies regarding the
6 prevention, suppression and service of forest fires.

7
8 **GENERAL PRINCIPLES**

9
10 To ensure consistent operations with all forest management licensees and companies regarding the
11 prevention, suppression and service of forest fires, the *Ministry of Northern Development, Mines, Natural*
12 *Resources and Forestry* (MNRF) and forest industry will follow the procedures described below.
13 These procedures were developed with the understanding that the forest industry is a partner in forest fire
14 management with a vested interest in fire prevention and effective fire suppression.
15 Forest operations are regulated through the *Crown Forest Sustainability Act* (CFSA), *Forest Management*
16 *Planning* (FMP), and associated approvals under the *Environmental Assessment (EA) Act*. Nothing in this
17 procedure constitutes further requirements under the CFSA or Forest Management Planning system.
18 Under the authority of the *FMP Manual* and the *CFSA*, the *Annual Work Schedule (AWS)* must describe
19 plans for forest fire prevention and suppression preparedness. The intent of these requirements is to:

- 20
21 • minimize the impacts of wildfires in forested areas;
22
23 • minimize loss of wood supply, equipment, and wages for forestry workers;
24
25 • minimize impacts on communities (safety and economic impact);
26
27 • allow operations to continue, as long as safely possible.

28
29 The *Forest Fires Prevention Act (FFPA)* requires all persons who start a fire outdoors to keep the fire
30 under control and to extinguish the fire before leaving the site. Also, any person that has started a fire that
31 is not kept under control shall report the fire without undue delay.

32 To provide for the safety of all workers involved in forest fire suppression, consistent standards must be
33 in place for forest fire suppression activities.

34
35 **1. NORMAL OPERATIONS**

36
37 The following procedures apply when forest operations are focused on their normal business. Under
38 Normal Operations, forest industry involvement in forest fire management is focused on forest fire
39 prevention and being prepared for action on a new fire they might discover.

40
41 The “*Fire Prevention and Preparedness Plan*” is submitted as a portion of the *AWS* and will be
42 reviewed by the local Fire Management Supervisor prior to the *AWS* being approved by the District
43 Manager.

- 44
45 1.2 Forest industry will report all fires found on or adjacent to their limits to the nearest OM Office
46 or the MNRF Fire Reporting Line at 310-FIRE (3473) (West Fire Region) or 310-FIRE (3473)
47 (East Fire Region) as quickly as possible and will take action on the fire according to their
48 capabilities.

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1.3 One of the key features of fire fighter training is the ability to recognize unsafe situations. If forest industry personnel are not able to work safely and productively on the forest fire, they should leave the scene to a safe distance. MNRF fire staff arriving on the scene may direct forest industry personnel to leave the scene for safety reasons.

1.4 If industry personnel find, contain and extinguish a fire caused by lightening or human activity not associated with forest industry operations and if the forest company has reported the fire as soon to: the nearest MNRF Fire Office or the MNRF Fire Reporting Line at 310-FIRE (3473) (West Fire Region) 310-FIRE (3473) (East Fire Region)

- a. The MNRF will compensate the forest company for action on these fires at a flat rate of \$600.
- b. Where the company incurs costs in excess of \$600, the company may submit a detailed invoice within 30 days of the incident, itemizing its costs on the fire.
- c. The MNRF will, with consideration of the investigation policies and operational limits, investigate the fire cause and create a fire report.

Note: Industry must report all fires to the local MNRF Fire Office to assist in the evaluation of the daily fire danger.

1.5 If under Subsection 1.4 (above) industry personnel take initial action or incur expenses trying to contain a forest fire but are unable to contain or extinguish the fire. The company must reported the fire as soon as possible to:

The nearest MNRF Fire Office or the MNRF Fire Reporting Line at:

- 310-FIRE (3473) - West Fire Region)
- 310-FIRE (3473) - East Fire Region,

- a. The local Ministry Fire Office will send assistance, investigate the fire cause and create a fire report.
- b. The MNRF will compensate the forest company for action on these fires at a flat rate of \$600.
- c. Where the company incurs costs in excess of \$600, the company may submit a detailed invoice within 30 days of the incident, itemizing its costs on the fire.

1.6 During normal operations when forest industry employees take initial action on a fire they remain employees of the forest industry for WSIB purposes.

1 **2. ESCALATED FIRE OPERATIONS**

2
3 Fire Operations are “escalated” when fire danger has increased to a critical level and/or a major fire
4 situation has developed. The following procedures will prepare both the Ministry of Natural Resources
5 and the forest industry to better respond to emergency situations where the Ministry may need to requests
6 industry support or assistance.

- 7
8 2.1 In order for equipment and staff to be used on short notice during escalated operations, forest
9 industry will provide rental and wage rates to the MNRF annually as part of the AWS. Forest
10 industry should list all heavy equipment, fire fighting equipment, vehicles, chain saw operators,
11 support personnel and camp facilities that will be available under escalated operations.
12
13 • Rates for vehicles and heavy equipment (bulldozers, skidders, trucks, etc.) should include
14 the float, working and a stand-by-rental rate of the machine including the operator wages,
15 current fuel prices and maintenance costs.
16 • If an hourly float rate is identified in the rate schedule, float times will be calculated from
17 the equipment’s originating location to a designated staging area or off-loading point
18 nearest the fire line.
19 • Per Diem rates for room and board at forest industry camps or facilities will include
20 cooking, food, camp support, supplies, etc.
21 • Rates for chainsaw operators will include wages, saw rentals and saw maintenance.
22

23 Note: When companies are supplying rates which include fuel costs, the rates should reflect the most
24 current fuel prices available. In view of the volatile nature of current fuel prices local fire managers may
25 renegotiate fuel costs at the time of hire (if conditions warrant).
26

27 2.2 If forest industry and the local MNRF Fire Office agree; agreed upon rates outlined in section 2.1
28 (above) can be submitted separately from the AWS submission. If industry cannot supply rates
29 due to special circumstances, a standard rental offer for the use of heavy equipment will be
30 completed at the time of hire, to establish a rental rate for the piece of equipment.
31

32 2.3 MNRF will compensate companies for services, personnel and equipment where the MNRF has
33 approved the use of the services in writing. The written approval will also describe the rates for
34 special services not included in annual plans and conditions that have been negotiated on the
35 scene (e.g. helicopters, buses, GIS services, road graders, etc.).
36

37 2.4 MNRF will compensate forest industry for employees working directly as fire fighters only if
38 they are certified SP-100 fire fighters. Staff trained to the SP-102 training standard for the
39 purposes of fire prevention and initial action are not considered as trained for the purposes of
40 extended fire suppression duties during Escalated Fire Operations.
41

42 Equipment operators, chain saw operators, and other forest industry personnel not directly
43 fighting the fire do not require SP-100 to carry out their duties.
44

45 Heavy equipment operators and heavy equipment technical specialists (line locators) hired to
46 construct fire line or fire guards must be trained to the SP-160 and SP-403 standards respectively.
47 Heavy equipment operators without training may be used under direct supervision by MNRF or
48 trained forest industry staff.
49

- 1 2.5 Forest industry employees working as crew bosses (supervising fire fighters on the fire line) must
2 have SP-200 training.
3
- 4 2.6 MNRF will compensate the forest industry for fire fighters and crew bosses identified in
5 Subsections 2.4 and 2.5, engaged in sustained fire fighting duties at the established rate as
6 outlined in section 2.1 or 2.2(above).
7
- 8 2.7 Forest industry employees identified in Subsections 2.4 and 2.5 will be paid overtime of time and
9 one half for all hours worked in excess of 8 hours per day, and for all hours worked on scheduled
10 days off and statutory holidays.
- 11 2.8 If the *AWS* does not specifically set rates for personnel mentioned in subsections 2.6, the rate
12 identified for the equivalent position in the current “PROVINCIAL EFF WAGE RATES” will be
13 used.
14
- 15 2.9 MNRF will compensate the company for supervisors and management personnel directly
16 involved in fire operations at the rates established in the *AWS* annually. Company personnel
17 visiting the fire to observe operations or assess impacts on company interests will not be
18 considered for compensation.
19
- 20 **2.10 If not specified as being covered as part of the compensation rates as described in**
21 **Subsections 2.5 or 2.8, MNRF will compensate the forest industry for employee benefits at**
22 **the rate of 13.0% of total wage earnings.**
23
- 24 2.11 For forest fires within designated fire regions, the MNRF is considered to be the summoning
25 authority for WSIB purposes. Persons summoned in these circumstances are deemed as a worker
26 for the MNRF. The MNRF will provide WSIB coverage for persons hired directly from forest
27 industry during Escalated Fire Operations. This includes forest industry personnel engaged in
28 ground fire fighting duties, heavy equipment operators and operators of contract equipment hired
29 by the forest industry. In this regard, forest industry workers hired under this procedure are
30 different from contractors because contracts for services provide for WSIB coverage under the
31 contract. In the event of an injury, the employee must report that injury to the MNRF
32 representative on site ensure that the proper WSIB reporting timeframes are met. The MNRF
33 supervisor on site will investigate all injuries.
34
- 35 2.12 Where MNRF requests forest industry owned forest fire suppression equipment to be used in
36 Escalated Fire Operations, the MNRF will pay the daily rates set according to Subsection 2.1 for
37 the use of that equipment and will recycle all the equipment at no charge to the forest industry if
38 the rental rate does not explicitly include the cost of recycle of the equipment by the forest
39 industry.
40
- 41 For portable forest fire fighting equipment (e.g. power pumps), MNRF will provide mixed fuel
42 for the operation of the equipment (rented “dry”). Fuel for vehicles and heavy equipment will be
43 included in the vehicle rental rate (rented “wet”) according to Subsection 2.1.
44
- 45 MNRF will replace or repair, forest industry owned forest fire suppression equipment that has
46 been lost or damaged during the suppression of a forest fire. MNRF will not repair or replace any
47 equipment damaged due to age or normal wear and tear (compensation for wear and tear should
48 be factored into the rental rates established by the forest industry annually), or due to negligence,
49 improper maintenance or improper operation by forest industry employees.

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2.13 MNRF has the authority under the FPPA to use any equipment available in emergency situations (FFPA, Sections 7 and 26). Compensation for equipment used under these circumstances will be at the rates set according to Subsection 2.1 and 2.2.

2.14 When the MNRF contracts for the use of heavy equipment from the forest industry, the forest industry will be compensated for use according to rates quoted in advance, usually within the *AWS*. If the forest industry hires additional heavy equipment and/or support to assist MNRF in suppression efforts, compensation for any additional hires will be at the rates as defined within the applicable *AWS*.

- Payment to any subcontractors will be organized through the hiring agent.
- MNRF will not directly accept invoices from any additional hires by forest industry.
- Invoices received directly by the MNRF will be returned to the company for processing.

2.15 If equipment that is not insured for use in forest fire suppression, including subsequent loss or damage, directed to work on a forest fire by Ministry personnel in an emergency situation the MNRF will proceed as follows:

- a) MNRF will compensate the forest industry for equipment that is lost or damaged by the wildfire, or directly as a result of suppression activities using "actual cash value".
- b) If equipment is required for an extended operational period, equipment that is not insured for use in forest fire suppression, including subsequent loss or damage, will be replaced by properly insured equipment as soon as possible.
- c) MNRF will not compensate the forest industry for equipment that is lost or damaged due to mechanical failure or operator error.

2.16 The forest industry will be required to submit, on a daily basis, a report detailing all costs incurred for that day. This report is to be approved and signed upon its receipt by the MNRF representative on site. A copy of the approved report will be provided back to the forest industry for their records.

2.17 The forest industry will invoice the designated MNRF office within thirty (30) days of when the costs were incurred.

2.18 The MNRF will process forest industry invoice(s) upon receipt and forward payment. Ministry payment terms are net 30 days from the date that the ministry office receives the company invoice.

Appendix E - FIRE DETECTION REPORT- FORM:

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Time Fire Noted: _____ Date: _____

Reported By: _____ Camp: _____

Location of Fire: (General) _____
(Geographic) _____

Access: Nearest Landable Lake _____

Nearest Drivable Road _____

Other Means _____

Size of Fire: _____

Fire Behaviour: _____

Is There Spread Potential: _____

Fresh Cutover _____ Standing Timber _____ Natural Boundaries _____

Wind Direction/Speed _____

Values to be Protected:

Buildings _____

Machinery _____

Wood _____

Water Sources: Pumping Units _____ Distance _____

Personnel on Fire, or Action you have in mind:

Person Taking Report: _____

1 **Appendix F - Retrieval of Company/Contractor Fire Equipment**
2 **by MNRF** (Letter from MNRF)

3
4 To ensure consistency in dealing with the maintenance and repair of Forest Industry fire equipment, this
5 letter will provide you with the guidelines our program will follow this year. We will continue to retrieve
6 your fire equipment that is used to fight forest fires at no cost, and retrieve any fire equipment used for
7 training or other purposes, at our current billing rates.

8
9 We have found there is a continual problem in distinguishing the equipment used on forest fires from
10 equipment used for other purposes, when it is brought into the Thunder Bay Service Centre for repairs. To
11 rectify this problem, we will require that, on a fire with an MNRF Incident Commander, your company
12 representative must **complete a form 195 (Transfer Record of Equipment and Supplies Loaned) or**
13 **prepare a letter**, listing the company equipment assigned to that fire. This form must be **signed by the**
14 **MNRF Incident Commander** to be eligible for MNRF to cover the cost of equipment retrieval.

15
16 If a fire has **no MNRF Incident Commander** on site, your **Company representative must prepare**
17 **either a form 195 or a letter** containing the same information, **for signature by the appropriate Fire**
18 **Management Supervisor**, to be eligible for MNRF to cover the cost of equipment retrieval. This system
19 will help expedite the retrieval of your equipment and reduce the chance of error in billing your Company
20 for equipment retrieval work. We appreciate your cooperation and effort.

21
22 Pat Harvey
23 Fire Management Supervisor (MNRF)
24 Kenora Fire Management Headquarters
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1 **Appendix G - Kenora Forest Independent Operator / Contractor Fire Information**

2
3 **1. Operation Description**

4
5 1.1. Operation Type:
6 (Harvest, Road Construction, Site Preparation) _____

7
8 1.2. Company Name: _____

9
10 1.3. Operation Contact Name and Mailing Address:
11 _____
12 _____
13 _____
14 _____

15
16 1.4. Contact Phone / Radio #s:
17 (Telephone) _____
18 (Radio) _____

19
20 1.5. Block Description: (If you require assistance completing this section, call your local planner.)

Block No. and Map Sheet:	Operating Period (by block)	Location of Block: (describe as simply as possible)	# of personnel on site each shift ***
<i>Example: Block # 35</i>	<i>July - August</i>	<i>10 km. up the Example road from Hwy?</i>	<i>6</i>

21
22 *** Note: This column indicates personnel normally available on the site for fire suppression.
23 Temporary personnel, i.e. haul truck drivers, would not count.

24
25 **2. Communications**

26
27 2.1. Able to meet the communications requirements for Trained and Capable status?
28 (Circle answer) **Yes No**

29
30 2.2. Are personnel on site aware of fire reporting procedures? **Yes No**

31
32 2.3. Fire Reporting Numbers: **Ministry of Natural Resources and Forestry: 310-FIRE (3473)**

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Fire Reporting Information

When reporting a forest fire, as much of the following information as possible will be provided:

<ul style="list-style-type: none"> Your name and phone number. The location - Road, Lake, etc. Size of the fire. Spread of the fire - ground, crowning, etc. Fuel type - muskeg, swamp, cut-over, plantation or good timber. Identify any property values in immediate danger. 	<ul style="list-style-type: none"> Location, name and size of the nearest lake and distance to the fire. Wind direction and strength. Access to fight the fire - roads, water, air People already present and available to fight the fire. Experience level of the people present. Equipment already on hand.
--	---

3. Equipment on site

(Please use the extra spaces provided or back of second page to describe equipment not listed.)

Type of Equipment on Operation:	Make, Model, Year	Fire fighting rental rate / hour including fuel and operator (Highlighted equipment only)	# of units	On-board Fire Suppression system? Yes or No?	Tracked Vehicle? (Includes rubber tired vehicles with bogey tracks or using chains) Yes or No?
Processor					
Feller Buncher					
Delimber					
Slasher					
Chipper					
Loader					
Forwarder					
Bulldozer					
Grapple Skidder					
Cable Skidder					
Backhoe					
Chainsaw					

Note: On-board fire suppression systems and fire extinguishers should be serviced regularly to ensure their operating status. Contact your supplier for details.

4. Fire Equipment

4.1 In compliance with minimum suppression equipment requirements as per Kenora SFL. Fire Plan? (circle answer)

Yes No

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4.2 List of Fire Equipment available on site:

Fire Equipment Type	# of units	Fire Equipment Type	# of units
Back Pack Pumps		5 lb. ABC	
Shovels		10 lb. ABC	
Axes		20 lb. ABC	
Pulaskis		Fire Pump (as per fire plan requirements)	
Fire Extinguishers		Hose (100 ft. lengths)	
232 gm. ABC		Radios	

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5. Fire Training – SP-102*

(Please list the names of the personnel on the operation and their respective fire training.)

Employee	Date of Training	Trainer
Howie Adams	May 13, 2022	Kurt Pochailo
Mark Scott	May 13, 2022	Kurt Pochailo
Shannon Rawn	May 13, 2022	Kurt Pochailo
Martin Wilcott	May 13, 2022	Kurt Pochailo
Gerald Ross	May 13, 2022	Kurt Pochailo
Macey Witzke	June 22, 2022	Kurt Pochailo
Fred Witzke	June 22, 2022	Kurt Pochailo
Noah Witzke	June 22, 2022	Kurt Pochailo
Chris Jansen	May 13, 2022	Kurt Pochailo
Dave Witzke	June 22, 2022	Kurt Pochailo
Rick Witzke	June 22, 2022	Kurt Pochailo
Dave Burt Jr.	May 13, 2022	Kurt Pochailo
Greg Mosioner	May 13, 2022	Kurt Pochailo
Shaun Morrison	May 13, 2022	Kurt Pochailo
Johnathan Beauchamp	May 13, 2022	Kurt Pochailo
Jon Wilson	May 13, 2022	Kurt Pochailo
Les Alcock	May 13, 2022	Kurt Pochailo
Ben Scott	May 13, 2022	Kurt Pochailo
Philip Boucha	May 13, 2022	Kurt Pochailo
Rob Boucha	May 13, 2022	Kurt Pochailo
Richard Schiebler	May 13, 2022	Kurt Pochailo
Lorne Poulin	May 13, 2022	Kurt Pochailo
Mel Michalchuk	May 13, 2022	Kurt Pochailo
Lawrence Derouard	May 13, 2022	Kurt Pochailo
Mark Wilcott	May 13, 2022	Kurt Pochailo
Dante Derouard	May 13, 2022	Kurt Pochailo

Davis Ross Giesbrecht	May 13, 2022	Kurt Pochailo
Tim Lighthouse	May 13, 2022	Kurt Pochailo
Lenard Thain	May 13, 2022	Kurt Pochailo
Darrell Mosioner	May 13, 2022	Kurt Pochailo
Rob Neil	May 13, 2022	Kurt Pochailo
Tyler Nakka	May 13, 2022	Kurt Pochailo
Chris Wilcott	May 13, 2022	Kurt Pochailo
Austin Wilcott	May 13, 2022	Kurt Pochailo
John Meek	May 13, 2022	Kurt Pochailo

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6. Prevention

6.1 Personnel aware of Company general prevention procedures as per Kenora SFL. Fire Plan? (Circle answer)

Yes No

6.2 Are personnel familiar with the Guidelines for Modifying Forest Operations in Response to Fire Danger with the Modifying Industrial Operations Protocol and how to obtain the Modification codes for their operations?

(Circle answer)

Yes No

6.3 Are personnel familiar with and willing to carry out enhanced prevention measures outlined in the Kenora SFL Fire Plan when deemed necessary by the Modifying Industrial Operations Protocol?

(Circle answer)

Yes No

7. Fire Safety

If operation threatened by fire are on site personnel aware of the evacuation procedures?

(Circle answer)

Yes No

8. Acknowledgment

I understand that the information presented in this package will be used to initially classify the operation as “Trained and Capable” or “Limited” as per the Modifying Industrial Operations Protocol.

Name: _____ Date: _____

Appendix H - CONTRACTOR EQUIPMENT RATES

The following equipment list shows contractor owned machines categorized into three weight classes. Factors considered when arriving at these rates were: horsepower, size and capabilities.

Equipment rates are “WET” rates and include the fuel costs associated with the operation of the equipment, as well as the operators’ and mechanics’ wages.

Equipment rates **do not include:** travel time, pick-up trucks, meals, accommodation or the costs associated with the retrieval / recycling of equipment. For requisitions that do not have an established rate, new rates may be negotiated between the Company and MNRF as required.

Equipment Rates

EQUIPMENT	Regular Time Per (per hour)	Rate after 8 hours (per hour)	Standby Rate / Rate (per hour)
All terrain vehicle	\$75.00/day	N/A	N/A
Bulldozer, D6 size	\$ 184.00	\$ 211.60	\$ 110.40
Bulldozer, D7 size	\$ 201.25	\$ 231.44	\$ 120.75
Bulldozer, D8 size	\$ 230.00	\$ 264.50	\$ 138.00
Chainsaw & Feller	\$ 51.75	\$ 59.51	N/A
Excavator	\$ 207.00	\$ 238.05	\$ 124.20
Backhoe Loader	\$ 150.00	\$ 172.50	\$ 90.00
Feller Buncher	\$ 207.00	\$ 238.05	\$ 124.20
Grader > 21,000 kg	\$ 145.00	\$ 166.75	\$ 87.00
Grader < 21,000 kg	\$ 140.00	\$ 161.00	\$ 84.00
Loader, rubber tired (bucket)	\$ 145.00	\$ 166.75	\$ 87.00
Pumping Unit (excluding hose)	\$ 125.00	\$ 143.75	N/A
Skidder	\$ 150.00	\$ 172.50	\$ 90.00
Tanker Forwarder (<2,000 gal)	\$ 149.50	\$ 171.93	\$ 89.70
Tanker Forwarder (2,001 – 3,000 gal)	\$ 172.50	\$ 198.38	\$ 103.50
Tanker Forwarder (>3,001 – 5,000 gal)	\$ 207.00	\$ 238.05	\$ 124.20
Truck, escort	\$ 57.50	\$ 66.13	N/A
Truck, float	\$ 170.00	\$ 195.50	N/A
Truck, gravel	\$ 130.00	\$ 149.50	\$ 78.00
Truck with tank for fueling equipment	\$172.50/day	N/A	N/A
Truck, pickup	\$250/day	N/A	N/A
Washer, pressure	\$ 74.75	\$ 85.96	\$ 44.85

* Additional cost of \$0.56 per km after 225km/day

* Additional fuel surcharge of 15% applied to all invoices

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APPENDIX C

WATER CROSSING STANDARDS

FOR THE

KENORA FOREST

1 **Water Crossing Standards**

2 The Ministry of Natural Resources and Forestry/Fisheries and Oceans Canada Protocol for the
3 Review and Approval of Forestry Water Crossings, 2017 (the Protocol) provides a risk-informed
4 Proponent self-screening approach for lower-risk water crossings that utilizes pre-determined
5 and mandatory technical water crossing standards to direct routine water crossing construction
6 and decommissioning activities in a manner that protects the productivity of Ontario's
7 commercial, recreational or Aboriginal (CRA) fisheries or fish that support such a fishery.
8 Adopting this type of risk-informed and modernized approach will allow government and
9 industry stakeholders to focus resources towards planning and reviewing water crossing
10 activities that pose a greater potential risk of serious harm to Ontario's CRA fisheries or fish that
11 support such a fishery.

12 The approved water crossing standards in the Protocol have been developed collaboratively with
13 input from the Ministry of Natural Resources and Forestry (MNRF), Department of Fisheries and
14 Oceans (DFO) and representatives from Ontario's forest industry. They represent minimum
15 levels of performance requirements that must be met by the proponent when constructing and
16 decommissioning water crossings using a proponent self-screening approval framework.

17 The conditions and requirements included in the general and specific water crossing standards
18 have been deemed by MNRF and DFO staff as the necessary mitigation measures required to
19 classify the water crossing project as not likely to result in serious harm to CRA fisheries or fish
20 that support such a fishery. If a proponent determines that the requisite water crossing standards
21 that apply to their specific project can be implemented, they may proceed with their activity, so
22 long as the water crossing standards notification requirements are met, and forest management
23 approval processes outlined in this Protocol and the appropriate version of FMPM are followed.

24 In cases where a Proponent determines that the requisite water crossing standards that apply to
25 their specific project cannot be implemented, a review and approval will be required by either
26 MNRF and/or DFO as per the Protocol.

27 Failure to follow the requirements of these water crossing standards could result in compliance
28 and enforcement actions under both the *Fisheries Act* and the *Crown Forest Sustainability Act*
29 (CFSA).

30 Water crossings in which a water crossing standard is being proposed for construction or
31 decommissioning will be approved in conjunction with the approval of, or revision to, the
32 Annual Work Schedule (AWS).

34 **1.0 General Water Crossing Standards That Apply to All Water Crossings**

35 This general water crossing standard applies to all water crossings constructed or
36 decommissioned under the authority of the CFSA for which a self-screening approval approach
37 is being implemented. Additional measures that are specific to certain water crossing types or
38 structures must also be implemented.

1 **General Standards**

- 2 • The implementation of water crossing standards (i.e. type and location of project) must
3 be consistent with the applicable and approved FMP.
- 4 • The implementation of water crossing standards must be overseen or carried out by
5 individuals who are trained and competent to:
- 6 – Understand the intent and objectives of the specification’s standards;
7 – ensure that specification’s water crossing standards and appropriate mitigation
8 measures are satisfactorily applied; and
9 – Recognize when water crossing standards and appropriate mitigation measures
10 have not been satisfactorily implemented and understand the requirements to
11 report and correct any mistakes that have occurred.
- 12 • The project must be compliant with applicable water crossing standards and guidelines in
13 the most recent versions of Ontario’s forest management guide(s) that address the
14 conservation of biodiversity at the landscape scale and the stand and site scales and
15 MNRF’s Crown Land Bridge Manual.

16 **Design and Location**

- 17 • The project does not include watercourse realignment.
- 18 • Projects are designed and constructed in a way that minimizes loss or disturbance to
19 riparian vegetation. The removal of riparian vegetation must be restricted to the
20 disturbance footprint required for the construction, maintenance and decommissioning of
21 water crossings.

22 **Erosion and Sediment Control**

- 23 • Erosion and sediment control measures must be installed prior to the commencement of
24 construction or decommissioning activities to prevent the release of sediment or other
25 deleterious substances to the watercourse. Erosion and sediment control measures will be:
- 26 – Effective and installed properly with respect to the site conditions;
27 – Inspected regularly during the course of construction with any necessary repairs
28 being made if any damage occurs;
29 – Maintained until the site has become stabilized through the permanent re-
30 establishment of vegetation (i.e., a root mass has been established that ensures site
31 stabilization), either naturally or through planting and tending activities within
32 disturbed areas and approaches, and/or they have been stabilized with rip-rap, or
33 appropriately sized non-erodible aggregate material.
- 34 • Fill material placed below the normal high water mark will be erosion-resistant and/or
35 protected from erosion.
- 36 • Water crossings are to be constructed and decommissioned to help ensure that storm
37 water runoff from bridge decks, side slopes, and road approaches and ditches are directed
38 away from the watercourse and into a retention pond or vegetated areas to remove

1 suspended solids, dissipate velocity, and prevent sediment and other deleterious
2 substances from entering the watercourse. Erosion and siltation in ditch lines adjacent to
3 watercourse crossing approaches are to be controlled by using sediment traps such as
4 rock/soil dams or log jams as site conditions warrant.

- 5 • Crossing sites are to be stabilized during and post construction and decommissioning,
6 including any material stockpiling, spoil, and/or other waste materials to prevent
7 sediment or other deleterious substances from entering the watercourse. Cut and fill
8 slopes around the water crossing structure and decommissioned sites are to be stabilized
9 at a 2:1 slope or stable angle of repose for the materials used using site appropriate
10 methods.

11 **CRA fisheries or fish that support such a fishery**

- 12 • At any time of year, the free movement of water and the passage of fish may not be
13 blocked or otherwise impeded up and down stream of the crossing, with the exception of
14 potential and temporary blockage due to water crossing construction/decommissioning
15 activities.
- 16 • All in-water construction and decommissioning activities must abide by the appropriate
17 fisheries in-water timing windows documented in approved FMPs and/or forest
18 management guides in order to avoid disrupting sensitive fish life stages. In cases where
19 the fishery community inventories at the location of the proposed project are not well
20 documented, the most restrictive in-water timing window must be used.
- 21 • All in-water construction and decommissioning activities must be undertaken in an
22 uninterrupted fashion and be completed in an appropriate timeframe so as to minimize
23 the potential for site disturbance.
- 24 • The construction and decommissioning activities must not employ the use of any
25 explosives.

26 **Construction and Maintenance**

- 27 • Machinery must be maintained free of fluid and fuel leaks.
- 28 • Machinery must be operated on land with tracks/wheels above the normal high water
29 mark, or on ice in a manner that avoids disturbance to the banks of the watercourse and
30 adjacent riparian vegetation areas.
- 31 • Machinery must be washed, refueled and serviced a minimum of 30 metres away from
32 the watercourse. Fuel and other materials for the machinery are to be stored a minimum
33 of 30 metres away from the watercourse to minimize the chance of any deleterious
34 substance from entering the water.
- 35 • Removal of riparian vegetation must be restricted to the disturbance footprint required for
36 the construction, maintenance and decommissioning of water crossings. Site-specific
37 operational and/or safety concerns that warrant the removal of additional riparian
38 vegetation will be determined on a case-by-case basis and will be kept to a minimum
39 within the road right-of-way in order to help maintain the stability of watercourse banks.

- 1 • All debris resulting from construction and decommissioning activities must be removed
2 from the work site following the completion of the undertaking.
- 3 • If machinery fording the watercourse is required during the course of construction
4 activities, it will be limited to a one-time event (over and back) per piece of equipment
5 that is essential to implementation of the project, and must occur only if an existing
6 crossing at another location is not available or practical to use.
 - 7 – If minor rutting is likely to occur, watercourse bank and bed protection methods
8 (e.g., swamp mats, pads) are to be used provided they do not constrict flows or
9 block fish passage;
 - 10 – Grading of the watercourse banks for the approaches is not permitted;
 - 11 – If the watercourse bed and banks are steep and highly erodible (e.g., dominated by
12 organic materials and silts) and erosion and degradation are likely to occur as a
13 result of equipment fording, a temporary crossing structure or other practice must
14 be used to protect these areas;
 - 15 – The one-time fording must adhere to the appropriate in-water timing windows;
16 Fording must occur under low-flow conditions and not when flows are elevated
17 due to local rain events or seasonal flooding.

19 **1.1 Water Crossing Standards That Apply to Specific Water Crossings**

20 **Structures/Practices**

21 The following water crossing standards apply to specific water crossing structures and/or
22 practices and **must be implemented in addition to the general water crossing standards.**

24 **1.1.1 *Water Crossing Standard Identifier: CONST-CLR-BRDG***

25 **1.1.2 Water Crossing Standards for the Construction of Clearspan Bridges**

26 This water crossing standard applies to the construction of clear span bridges and their footprints,
27 including associated abutments, cribs and/or sill logs.

28 **General Standards**

- 29 • The conditions and requirements of the general water crossing standards must be
30 implemented in addition to, and in conjunction with, this water crossing standard.

31 **Design and Location**

- 32 • Bridges must not be located on meander bends, braided watercourses, alluvial fans, or
33 any other area that is inherently unstable and may result in the alteration of natural stream
34 functions or erosion and scouring of the water crossing structure.

35 **Erosion and Sediment Control**

- 1 • Appropriate site-specific mitigation measures must be enacted to ensure the construction
2 of clearspan bridges, including bridge cribs, abutments, and associated fill slopes are not
3 subjected to the impacts of long-term or ongoing erosion. At a minimum, measures must
4 include:
 - 5 – Clearspan bridges, including bridge cribs and fill slopes must be stabilized with
6 appropriately sized non-erodible material (e.g., rocks, cobble sized stones). Rock
7 used to stabilize crossings and watercourse banks will be clean, free of fine
8 materials, and of sufficient size to resist displacement during peak flood events.
9 The rock must be placed at the original watercourse bank grade to ensure there is
10 no infilling or narrowing of the watercourse.
 - 11 – Fill material placed below the normal high water mark of the watercourse must be
12 erosion resistant and/or protected from erosion.

13 CRA Fisheries or Fish that Support Such a Fishery

- 14 • The project must not be located within 100 metres of fisheries spawning or sensitive
15 habitat if any in-water work is a requirement of the project.

16 Construction and Maintenance

- 17 • The bridge, including its abutments, must be placed entirely outside the normal high
18 water mark.
- 19 • The construction of clearspan bridges must not result in the alteration of the bed or banks
20 of the watercourse or infilling or narrowing of the watercourse channel.

21 **1.1.3 *Water Crossing Standard Identifier: DECOM-CLR-BRDG***

22 **1.1.4 Water Crossing Standards for the Decommissioning of Clearspan Bridges**

23 This water crossing standard applies to the decommissioning of clear span bridges and their
24 footprints, including associated abutments, cribs and/or sill logs. In certain cases, local site
25 conditions may create a higher likelihood for potential damage to watercourse banks and/or fish
26 habitat when bridges abutments, cribs, and/or sill logs are completely removed as opposed to
27 leaving them in place. In these cases, Proponents must ensure that appropriate sedimentation and
28 erosion mitigation approaches, in addition to any necessary public safety actions, continue to be
29 implemented.

30 General Standards

- 31 • The conditions and requirements in the general water crossing standards must be
32 implemented in addition to, and in conjunction with, this water crossing standard.
- 33 • Decommissioning of water crossings will only occur if it is consistent with the approved
34 road use management strategy in the applicable FMP and is scheduled for
35 decommissioning in the current AWS (Table AWS-2).

36 Erosion and Sediment Control

- 1 • Upon decommissioning, including the removal of bridge abutments, cribs, and/or sill
2 logs, the site must be stabilized and protected against erosion.
- 3 • Bridge abutments and cribs may be left in place if they are in good condition, stable for
4 the long term, are not affecting watercourse or fish community dynamics, and are
5 permissible in the approved FMP and/or AWS-2 table.
- 6 • Surface water runoff and road approaches and ditches must be directed away from the
7 watercourse and into vegetated areas. Diagonal berms or waterbars must be installed
8 where the erosion potential of the road approaches is likely to result in the road's gravel
9 surface and underlying fill being deposited into the watercourse over time. Sediment
10 traps used within ditch lines adjacent to the watercourse crossing approach should be
11 replaced and/or maintained to their original condition at the time of crossing
12 decommissioning.

13 **CRA Fisheries or Fish that Support Such a Fishery**

- 14 • The project must not be located within 100 metres of fisheries spawning or sensitive
15 habitat if any in-water work is a requirement of the project.

16 **Construction and Maintenance**

- 17 • The decommissioning of clearspan bridges, including the removal of bridge abutments,
18 cribs and/or sill logs will not result in the alteration of the bed or banks of the
19 watercourse or infilling or narrowing of the watercourse channel.

20 **1.1.5 *Water Crossing Standard Identifier: CONST-OPN-ARCH***

21 **1.1.6 *Water Crossing Standards for the Construction of Open Bottom Arch Culverts***

22 Arch culverts are open-bottom structures that typically span the width of the waterbody channel,
23 require minimal in-water construction activities and result in minimal impacts to the banks of the
24 waterbody.

25 **General Standards**

- 26 • The conditions and requirements in the general water crossing standards must be
27 implemented in addition to, and in conjunction with, this water crossing standard.

28 **Design and Location**

- 29 • The arch culvert must not be located on meander bends, braided watercourses, alluvial
30 fans, or any other area that is inherently unstable and may result in the alteration of
31 natural stream functions or erosion and scouring of the water crossing structure.

- Culverts must be sized to a minimum Q25 design flow using MNRF water engineering/calculation software, or equivalent software programs deemed acceptable by the MNRF.

Erosion and Sediment Control

- Appropriate site-specific mitigation measures must be enacted to ensure the construction of arch culverts and associated footings and fill slopes are not subjected to the impacts of long-term or ongoing erosion. At a minimum, measures must include:
 - Stabilizing the crossing, including footings and fill slopes, with appropriately sized non-erodible material (e.g., rocks, cobble sized stones). Rock used to stabilize crossings and watercourse banks must be clean, free of fine materials, and of sufficient size to resist displacement during peak flood events. The rock must be placed at the original watercourse bank grade to ensure there is no infilling or narrowing of the watercourse.
 - Fill material placed below the normal high water mark of the watercourse will be erosion resistant and/or protected from erosion.

CRA Fisheries or Fish that Support Such a Fishery

- The project must not be located within 100 metres of fisheries spawning or sensitive habitat if any in-water work is a requirement of the project.

Construction and Maintenance

- The project cannot result in any excavation and/or reconstruction of the streambed.
- The crossing must be installed under low-flow conditions and not when flows are elevated due to local rain events or seasonal flooding.
- The culvert must be secured on continuous footings outside of the normal high water mark and will be constructed according to the manufacturer's specifications using materials that are appropriate for the site and expected loads.
- Where footings are constructed with concrete, appropriate measures must be taken to ensure concrete materials do not encroach into the bed of the watercourse.
- The construction of arch culverts must not result in the alteration of the bed or banks of the watercourse or infilling or narrowing of the watercourse channel.

1.1.7 Water Crossing Standard Identifier: CONST-SNOW-ICE

1.1.8 Water Crossing Standards for the Construction of Snow Fill and Ice Bridge Crossings

Snow fills and ice bridges, two types of water crossings that provide cost-effective access when lakes, rivers and streams are frozen, are typically used for temporary winter access in remote

1 areas. Ice bridges are normally constructed on larger watercourses that have sufficient stream
2 flow and water depth to prevent the ice bridge from coming into contact with the stream bed or
3 restricting water movement beneath the ice. Snow fills, however, are temporary crossings
4 constructed by filling the channel of a watercourse with clean compacted snow.

5 General Standards

- 6 • The conditions and requirements of the general water crossing standards must be
7 implemented in addition to, and in conjunction with, this water crossing standard.

8 Design and Location

- 9 • The work must not include dredging, placing fill, or grading or excavating the bed or
10 banks of the watercourse.

11 Erosion and Sediment Control

- 12 • No earth fill or aggregate is permitted below the normal high water mark of the
13 watercourse. Crossings must be constructed of clean water, ice and snow that are free of
14 dirt and debris.

15 CRA fisheries or fish that support such a fishery

- 16 • Snow fills and ice crossings must not restrict water flow within the watercourse where it
17 occurs naturally during winter conditions, or otherwise completely obstruct fish passage
18 at any time.
- 19 • The project must not be located within 100 metres of fisheries spawning or sensitive
20 habitat.

22 Construction and Maintenance

- 23 • Appropriate seasonal conditions must be present (e.g., adequate depth of snow and ice,
24 winter temperatures) to provide certainty that the construction and removal water
25 crossing standards can be satisfactorily implemented.
- 26 • Aggregate or loose woody material cannot be used to top the crossing.
- 27 • If logs or corduroy are used to stabilize the approaches of ice and snow fill crossings:
 - 28 – The logs must be clean;
 - 29 – The logs may be securely bound together to facilitate removal and minimize site
30 disturbance;
 - 31 – No logs or woody debris can be left within the watercourse;
 - 32 – Corduroy (if used) adjacent to the watercourse banks must be removed and placed
33 outside the floodplain to help prevent a damming effect on the site. Corduroy that
34 is frozen or embedded into the road approaches or watercourse banks must be left
35 in place so as to not expose mineral soil adjacent to the watercourse. The
36 remaining snow and ice can be left to melt in the spring. If required, remedial
37 work will be carried out on the site after the crossing is removed to ensure that no
38 logs or woody debris can wash back into the watercourse.

- 1 – Logs may be placed on road approaches to assist in diverting runoff away from
- 2 the watercourse; however, they must be placed outside of the floodplain and in
- 3 such a manner as to ensure that they do wash back into the watercourse.
- 4 • Sanding of snow and ice crossings must be kept to a minimum and within the bounds of
- 5 operational health and safety considerations.
- 6 • Corduroy logs or brush mats must be installed on the approaches to the watercourse
- 7 crossing when conditions are soft in order to avoid disturbing the banks and crossing
- 8 approaches.
- 9 • If water is being pumped from a watercourse to reinforce the crossing, the intakes must
- 10 be sized and adequately screened to prevent debris blockage and fish entrainment.
- 11

12 **1.1.9 Water Crossing Standard Identifier: CONST-SM-CULV**

13 **1.1.10 Water Crossing Standards for the Construction of Single, Small Closed-Bottom**

14 **Round Culverts**

15 This water crossing approval specification applies to the construction of single, round,

16 corrugated, closed-bottom steel, aluminum, or plastic culverts that are less than or equal to 1200

17 millimeters (4') in diameter and do not require site-specific engineering approval (i.e., span less

18 than three (9.8')), as per MNRF's Crown Land Bridge Manual, 2008.

19 General Standards

- 20 • The conditions and requirements in the general water crossing standards must be
- 21 implemented in addition to, and in conjunction with, this water crossing standard.
- 22 • The project does not:
 - 23 – Replace an existing open-bottom crossing (e.g., clear span bridge, arch culvert);
 - 24 – Replace an existing closed-bottom culvert that is larger in diameter than that
 - 25 being installed; or
 - 26 – Involve the installation of more than one closed-bottom culvert at the crossing
 - 27 location.

28 Design and Location

- 29 • Culvert crossings must be located, designed and constructed to minimize the likelihood
- 30 of ongoing outlet scour, culvert undermining and/or the erosion of fill in order to provide
- 31 for stable and non-perched crossing sites that can provide for fish passage.
- 32 • The culvert must not be located on meander bends, braided watercourses, alluvial fans, or
- 33 any other area that is inherently unstable and may result in the alteration of natural stream
- 34 functions or erosion and scouring of the crossing structure.
- 35 • Culverts must be sized to a minimum Q25 design flow using MNRF water
- 36 engineering/calculation software, or equivalent software programs deemed acceptable by
- 37 MNRF.

- In cases where an unmapped watercourse is encountered during the construction of a road, and where a proper watershed analysis cannot be completed to determine the Q25 design flow, the culvert must be sized to ensure that it spans from bank to bank within the watercourse.

- Culverts must not be installed where the channel slope at the crossing location (i.e., physical rise over run of the culvert footprint prior to construction) is of a gradient greater than 2.0%.
- Culverts must not be installed where the slope of road approaches or either of the bank approaches is greater than 30%/17°.
- Crossing locations must be selected where culverts can be embedded below the grade of the watercourse bed. The amount of embedment should be determined by local conditions.

Erosion and Sediment Control

- Appropriate site-specific mitigation measures must be enacted to ensure the construction of the culvert crossing does not result in the ongoing erosion of fill. At a minimum, measures must include:
 - Both the inlet and outlet ends of the culvert must be stabilized with appropriately sized non-erodible material (e.g., rocks, cobble sized stones) to prevent erosion of the fill slope and the watercourse bed. Rock used to stabilize crossings and watercourse banks must be clean, free of fine materials and of sufficient size to resist displacement during peak flood events. The rock shall be placed at the original watercourse bank grade to ensure that there is no infilling or narrowing of the watercourse.
 - Fill material placed below the normal high water mark of the watercourse must be erosion resistant and/or protected from erosion.

CRA fisheries or fish that support such a fishery

- The project must not be located within 100 metres of fisheries spawning or sensitive habitat.
- The project must not be located within 500 metres of any brook trout spawning or upwelling areas.
- The project must not be located on any watercourses or tributaries that flow into, and are within 500 metres, of known naturally reproducing brook trout lakes.
- The combination of culvert size, length, slope and drainage area will not create accelerated water velocities that will consistently and predictably impede the passage of fish.

Construction and Maintenance

- The crossing must be installed under low-flow conditions and not when flows are elevated due to local rain events or seasonal flooding.

- Both the interior and exterior of round, closed bottom culverts that are installed on CRA fisheries or fish that support such a fishery waterbodies must be corrugated to ensure structural stability and facilitate fish passage.
- The grade of the culvert must reflect the grade of the natural watercourse bed.
- Backfill must be adequately compacted around the culvert. Only clean sand or gravel can be used as backfill and must be compacted around the culvert in layers.
- Culverts must be the correct length to permit banks to be sloped at an angle of 2:1 or a stable angle of repose for the materials used.

1.1.11 *Water Crossing Standard Identifier: DECOM-SM-CULV*

1.1.12 **Water Crossing Standards for the Decommissioning of Single, Small Closed-Bottom Round Culverts**

This water crossing approval specification applies to the decommissioning of all round, closed-bottom steel, aluminum, or plastic culverts that are less than or equal to 1200 millimeters (4') in diameter.

General Standards

- The conditions and requirements in the general water crossing standards must be implemented in addition to, and in conjunction with, this water crossing standard.
- Decommissioning of water crossings will only occur if it is consistent with the approved road use management strategy in the applicable FMP and is scheduled for decommissioning in the current AWS (Table AWS-2).
- If the construction of the crossing was originally reviewed and approved by MNRF and/or DFO, all applicable conditions of approval must be fulfilled.

Erosion and Sediment Control

- Upon decommissioning, the site must be stabilized and protected against erosion. Approaches to the watercourse should be stabilized at a 2:1 slope or stable angle of repose for the materials used using site appropriate methods.
- All exposed soil must be seeded and/or stabilized immediately following completion of activities. Erosion and sediment control measures must be appropriate for the site conditions and maintained until vegetation has become permanently re-established within disturbed areas and/or exposed mineral soils have been stabilized with rip-rap or appropriately sized non-erodible rock material.
- Materials removed or stockpiled during decommissioning (e.g. grubbing, overburden fill) must be deposited outside the floodplain and stabilized/protected against erosion to ensure material does not enter the watercourse.

- 1 • Surface water runoff and road approaches and ditches must continue to be directed away
2 from the watercourse and into vegetated areas. Diagonal berms or waterbars must be
3 installed where the erosion potential of the road approaches is likely to result in the
4 road's gravel surface and underlying fill being deposited into the watercourse over time.
5 Sediment traps used within ditch lines adjacent to the watercourse crossing approach
6 must be replaced and/or maintained to their original condition prior to the construction of
7 the crossing.
- 8 • Appropriately sized erosion-resistant materials must be used below the normal high water
9 mark for stream bank rehabilitation.

10 CRA Fisheries or Fish that Support Such a Fishery

- 11 • The project must not be located within 100 metres of fisheries spawning or sensitive
12 habitat if any in-water work is a requirement of the project.

13 Construction and Maintenance

- 14 • The crossing must be decommissioned under low-flow conditions and not when flows are
15 elevated due to local rain events or seasonal flooding.
- 16 • The watercourse must be restored as closely as possible to its original condition prior to
17 the construction of the crossing, including retaining as close as possible the original
18 stream alignment.
- 19 • All crossing infrastructure must be completely removed from the site.
- 20 • Grubbing must be minimized to leave as much of the existing vegetation intact.