2021-2022 First Nations' Emergency Services Society - Indigenous Services Canada

On-Reserve Operational Fuel Treatment

and *On-Reserve FireSmart™ Programs*

Program and Application Guide

1. Introduction

The First Nations' Emergency Services Society (FNESS)-Indigenous Services Canada (ISC) *On-Reserve Operational Fuel Treatment* and *On-Reserve FireSmart™ Programs* are separate program streams that are managed by FNESS. Grant administration is provided by FNESS with provision of funding by ISC. These related initiatives support First Nation communities to mitigate risk from wildfire in the Wildland Urban Interface (WUI). Reserve lands are eligible for funding.

These programs support planning initiatives and will only fund activities on areas identified within those plans. Funding for these plans is available. Assistance with the planning aspect is available to all communities by request.

See the list of eligible activities herein and consult with a FNESS Fuel Management Specialist to determine your path to safeguarding your community.

> *The two programs are different, and applicants must be aware to submit appropriate applications, reports, and other documentation specific to their program of interest.*

The **FNESS-ISC *On-Reserve Operational Fuel Treatment Program*** is designed for communities wishing to treat forest fuels.

Areas funded under this program must be identified in a Community Wildfire Protection Plan (CWPP), Community Wildfire Resiliency Plan (CWRP) or other peer-reviewed fire management plan.

The program is primarily designed to fund new operational fuel management projects up to $75,000.00 in areas with moderate to extreme WUI wildfire threat risk and less than 1km from homes and critical infrastructure. However, maintenance treatments on previously treated areas will be considered. All maintenance Treatment applications will be subject to a joint site visit to assess the merits of maintenance.

The program also funds fuel management prescriptions on lands identified as hazardous to the community.

This program has an extended time frame of 2 years to facilitate operations over two complete snow-free treatment windows which will ensure complete treatment of surface fuels.

The **FNESS-ISC *On-Reserve FireSmart™ Program*** is primarily designed to fund treatment of fuels and other combustible hazards adjacent to, and within 100 m , of housing or community infrastructure.

The program supports FireSmart™ activities to a maximum $50,000.00 within FireSmart™ Zones (Non Combustible, 1, 2 and 3) to achieve outcomes consistent with the FireSmart™ Homeowners Manual. The program also funds FireSmart™ Community Hazard and Home Ignition Zone Assessments which can serve as de-facto FireSmart™ plans for the community if spatial information is captured and presented in such plans. Communities requiring assistance with such plans may call FNESS.

The primary objective of both programs is to fund treatments which protect residential and critical infrastructure.

Key Considerations:

1. Applicants must have an approved ISC Timber Permit prior to commencement of the activities.
2. The requirement to obtain a timber permit does not apply to Nations listed under schedule 2 of the *First Nations Land Management Act (S.C. 1999, c. 24)* unless the subject lands were excluded from the Land Code.
3. ISC Timber Permits expire on April 30th the year following issue. (For example, a permit signed on Dec 31, 2021 will expire on April 30, 2022 and a permit signed on Jan 1, 2022 will expire April 30, 2023.)

2. Eligible Applicants

All First Nation Bands and Treaty First Nations in BC are eligible to apply. All Reserve and subject areas of Treaties that are in effect, are eligible for funding.

3. Project Eligibility for Funding

Requirement to consult

- To qualify for funding, First Nation applicants must consult with a FNESS Fuel Management Specialist/Liaison (FMS/L) prior to submission of a formal application.

Program Specific requirements

FNESS-ISC *On-Reserve Operational Fuel Treatment Program*

Operational Fuel Treatment Project(s) must be located On-Reserve and :

- Target forest fuels
- Be identified as an area of Moderate to Extreme Wildfire Behavior Threat Class on the Provincial Strategic Threat Analysis (PSTA) BC map https://www.fness.bc.ca/downloads/wui-threat-class-map-psta-2019.pdf or verified by a field assessment of wildfire threat using an approved WUI Wildfire Threat Assessments Guide. Minimum one plot per treatment unit must be provided.

- Be identified as a priority treatment area within a CWPP and/or CWRP or another peer-reviewed plan acceptable to FNESS FMS/L. Such plans must include an assessment and spatial identification of fuel management priorities.
- Satisfies a structure density requirement of at least six (6) structures per square kilometer and is wholly contained within a one (1) kilometer radius of those structures.
- Proposed projects must be compliant with all applicable legislation and regulations: federal (e.g. Fisheries Act, Species at Risk Act); provincial (e.g. Forest and Range Practices Act, Open Burning Smoke Control Act, and Wildfire Act); and local authority (e.g. burning bylaws or other bylaws or plans).
- Where applicable, be eligible for or have required approvals, authorizations and/or permits from the Land Manager (e.g. BC Parks Area Manager, Natural Resource District Manager etc.).

Fuel Management Prescription Projects can be undertaken as separate, stand-alone projects which facilitate future funding applications, or they may be incorporated into a comprehensive operational fuel treatment application that combines prescription preparation and treatment.

All fuel management prescriptions prepared under this program must satisfy the requirements above and:

- Must be completed on the BCWS Fuel Management Prescription template shown in Appendix B https://www.fness.bc.ca/downloads/fuel-management-prescription-template-doc.docx
- Be consistent with BC Wildfire Service 2020 Fuel Management Prescription Guidance available at https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/fire-fuel-management/fuels-management/2020-wildfire-threat-assesment-guide-final.pdf
- **Must** be reviewed and supported by a FNESS FMS/L prior to initiation of the fuel management treatment.
- Where applicable be developed and signed/sealed by a Registered Forest Professional and other associated professionals where needed(e.g. Professional Engineer) operating within their particular scope of practice.

FNESS-ISC *On-Reserve FireSmart™ Program*

Project must be located On-Reserve.:

- Target combustible fuels.
- Target areas identified in a FireSmart™ assessment and plan.
- Be wholly contained within the FireSmart™ zones .
- Must provide a description of the structures to be treated, measures that will be taken, and be consistent with the standards and objectives established in the FireSmart™ Homeowners Manual.

4. Evaluation Criteria

Eligible projects which satisfy program requirements will be subjected to a scoring evaluation which will assess:

- Number of structures to benefit from treatment
- Community involvement with national FireSmart™ Program. Community Recognition or is engaged with the FireSmart™ Community Recognition Program.
- Impact on other initiatives or program activities(i.e. Community Resilience Investment (CRI) Program or other FNESS – ISC fuel treatment projects).
- Project addresses untreated forest fuels within the FireSmart™ Zones.
- Project addresses problematic fuel types.
- Community contributions in-kind or financial.
- Collaboration and coordination with communities that share common boundaries.
- Community performance history on projects of this nature.
- Proposed treatment cost. Cost effectiveness will be a major determinant in the application review process. Historical treatment and prescription costs in similar conditions will be considered in the evaluation.

5. Project Timelines for Completion

- FireSmart™ Projects must be completed within one year from date of approval.
- Fuel management projects must be completed within two years from date of approval. Extended timeframe is designed to permit surface fuel treatment during snow-free periods.
- Applicants are to contact ISC if the timber permit expires before work is completed to request a new timber permit.

6. Eligible Costs and Activities

Eligible costs are direct costs that are identified in the approved application, properly and reasonably incurred, and paid by the applicant to carry out eligible activities. Eligible costs can only be incurred from the date of application submission until the final report is submitted.

FNESS-ISC *On-Reserve Operational Fuel Treatment Program*

Comprehensive list of eligible activities

- Fire Management planning initiatives which spatially identify hazards to the community. Such plans as FireSmart™ Neighbourhood Hazard Assessment, Home Ignition Zone Assessment or other spatially explicit plans are eligible for funding.
- Timber permit application and documentation required by ISC.
- Fuel management prescription development or amendment.
- Species at Risk Act report (including Migratory Birds Convention Act & Fisheries Act) evaluation by Registered Professional Biologist, or Qualified Environmental Professional.
- Prescription amendments are recommended if existing prescription is more than three years old.
- Threat plot establishment or updating to conform to the current WUI Wildfire Threat Assessment Standards. Every polygon considered for treatment as part of an operational fuel treatment project must contain at least one threat plot.
- Post-treatment wildfire threat assessments.
- Staff and contractor costs directly related to prescription development or operational fuel treatment activities.
- Applicant administration costs directly related to prescription development or operational fuel treatment activities.
- Danger tree assessments.
- Tree felling, including hand and mechanical.
- Thinning, including hand and mechanical.
- Prescribed fire, including pile burning and broadcast burning.
- Burn Plan preparation, pre- and post-burn surveys using a methodology(s) acceptable to, and approved by, FNESS. Call FNESS to discuss your proposed methodology(s).
- Pruning.
- Tree planting for species conversion.
- Piling, including hand and mechanical.
- Debris management, including chipping, mastication and grinding.
- Debris removal, including chip removal, hog fuel removal and slash removal.
- Custom venting forecast.
- Directional falling of trees to protect structures.
- Chipping and/or hauling of material where burning is restricted for health reasons.
- Moving flammable fuels or ignition sources such as dead and decaying brush, grass, or vegetation, away from homes and critical infrastructure.
- Traffic and pedestrian control during active operations.
- Preparation of pre- and post-treatment photos, maps, spatial data, and metadata (see Appendix 1 for Map Requirements and Appendix 2 for Spatial Data

Requirements (Operational Fuel Treatment Prescriptions and/or Treatment Final Reporting).

FNESS-ISC *On-Reserve FireSmart™ Program*

All activities must be consistent with or contribute to the fire resiliency principles outlined in the FireSmart™ Homeowners Manual.

Under the FNESS-ISC *On-Reserve FireSmart™ Program* all activities must be conducted to prioritize risk reduction to structures and focus efforts from the structure outward to a maximum of 100m from structures.

Comprehensive list of eligible activities.

- Plan preparation and mapping.
- FireSmart™ Neighbourhood Hazard Assessment.
- Home Partners Home Ignition Zone Assessments.
- Prescribed fire, including pile burning and broadcast burning.
- Pruning.
- Tree planting for species conversion.
- Piling, including hand and mechanical.
- Debris management, including chipping, mastication and grinding.
- Debris removal, including chip removal, hog fuel removal and slash removal.
- Custom venting forecast.
- Danger tree assessments.
- Preparation of pre- and post-treatment photos, maps, spatial data, and metadata (see Appendix 1 for Map Requirements and Appendix 2 for Spatial Data Requirements (Operational Fuel Treatment Prescriptions and/or Treatment Final Reporting).
- Staff and contractor costs directly related to FireSmart™ activities.
- Applicant administration costs directly related to prescription development or operational fuel treatment, and FireSmart™ activities.
- Directional falling of trees to protect structures.
- Timber Permit application and documentation required by ISC.
- Species at Risk Act report (including Migratory Birds Convention Act & Fisheries Act) evaluation by Registered Professional Biologist, or Qualified Environmental Professional.
- Traffic and pedestrian control during active operations.
- Chipping and hauling of material created by homeowners.
- Moving flammable fuels or ignition sources such as dead and decaying brush, grass, or vegetation, away from homes and critical infrastructure.
- Other activities that are recommended or consistent with the guidance provided the BC Fire Smart – FireSmart™ Homeowners Manual.

7. Ineligible Costs and Activities

Any activity that is not outlined above or is not directly connected to activities approved in the application by FNESS is not eligible for grant funding. This includes:

- Emergency plans or related activities.
- Community Wildfire Protection Plan (CWPP) preparation (see note above).
- Local fire department training.
- Publication reviews or research.
- Purchase of machinery and equipment.
- Activities on land outside the interface or land that is scheduled for development.
- Activities for purposes other than fuel treatment (e.g. building of recreational trails without fuel management objectives).
- Staff training costs, including safety and first-aid training.
- Work undertaken by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD).
- Purchase of tools (e.g. hand saws, loppers) or structural protection equipment (e.g. hoses, sprinklers).
- Work undertaken to fulfill FLNRORD hazard abatement obligations under the *Wildfire Act*

8. Application Requirements and Process

Required Application Contents

FNESS-ISC *On-Reserve Operational Fuel Treatment Program*

- Completed application form signed by authorized Band signatory.
- First Nation Band Council Resolution, indicating: A) support for the application, B) willingness to provide overall grant management, and C) identifying a designated Band representative with signing authority for the project, if awarded.
- Operational fuel treatment project proposals must be accompanied with current Threat Assessment Worksheets (2012 or 2020 methodologies) and plot photos, representative of the treatment area, completed as per the WUI Wildfire Threat Assessments methodology used.
    - ► If you are applying for an area identified as a Priority Treatment Area in your latest CWPP/CWRP you may submit the plot information submitted with that plan.
- Copy of the CWPP/CWRP/other peer reviewed plan details for the proposed treatment area.
- Copy of applicable fuel management prescription if such exists.
- Copy of applicable Burn Plan if such exists.
- Maps that clearly identify the proposed area(s) that are the subject of the application.

FNESS-ISC *On-Reserve FireSmart™ Projects*

- Completed application form signed by authorized Band signatory.
- First Nation Band Council Resolution, indicating: A) support for the application, B) willingness to provide overall grant management, and C) identifying a designated Band representative with signing authority for the project if awarded.
- A map indicating the FireSmart Neighbourhood area of interest and specific structures to be treated.
- A description of the FireSmart zones to be treated and activities within each zone.

Submission of Applications

Applications should be submitted electronically as Microsoft Word or Portable Document Format (PDF) files.

All applications to be submitted to the following electronic address:
FNESS Forest Fuel Management Department
E-mail: kalexandre@fness.bc.ca

Review of Applications

FNESS will perform a review of applications to ensure the required application elements have been submitted and to ensure that basic eligibility criteria have been met.

All eligible applications will be reviewed and scored by a FNESS FMS/L. Scoring considerations and criteria include the following:

On-Reserve Operational Fuel Treatment Program

- Mapping quality and usefulness
- Priority of treatment as identified in completed CWPP/CWRP/other plans.
- Proximity to structures and community infrastructure.
- Wildfire Threat Rating for the proposed treatment area.
- Land use policies, development approval processes and development standards that mitigate wildfire threat in the WUI.
- Other plans and bylaws that consider open burning, access for emergency vehicles, access to water supply and suppression equipment, fire-resistant landscaping, or other wildfire issues.
- The estimated number of hectares to be treated, cost effectiveness of proposed treatment and proposed project cost per hectare.
- Degree to which the proposed fuel treatment is anchored, accessible/defensible and designed according to expected fire spread and intensity.
- Implementation of other non-fuel treatment recommendations identified in a completed CWPP/CWRP/other plans.
- Integration with other fuel management programs such as Community Resiliency

Investment (CRI) Program or Forest Enhancement Society of BC (FESBC), that will increase the effectiveness of the individual projects.
- Project strengthens or enhances previous projects in area.
- Cost effectiveness.
- Band performance history.
- Community contributions in-kind or financial.
- Project addresses untreated forest fuels within 1000m of structures.

On-Reserve FireSmart™ Projects

- Mapping quality and usefulness
- FireSmart™ Canada planning and other FireSmart™ initiatives.
- FireSmart™ Canada Community Recognition status.
- Community involvement and public education (including FireSmart™ committee, community assessment, FireSmart™ day).
- Proximity to structures and community infrastructure.
- Project addresses untreated forest fuels within the FireSmart™ Zones.
- The estimated number of structures to be treated, cost effectiveness of proposed treatment and proposed project cost per structure.
- Project strengthens or enhances previous projects in area.
- Band performance history.
- Community contributions in-kind or financial.
- Cost effectiveness.

9. Applicant Responsibilities

All applicants under this initiative are required by federal legislation to obtain appropriate authorizations to cut and/or remove trees from reserve lands prior to commencement of work.

Quarterly Updates - Project Status Report. A quarterly update on project status ***must*** be submitted to FNESS via email kalexandre@fness.bc.ca.

Successful applicants are responsible for completion of the project as approved and for meeting reporting requirements.

Bands are responsible for proper fiscal management, including maintaining acceptable accounting records for the project. FNESS and/or ISC (Canada) reserve the right to audit these records. Communities will be required to provide supporting financial documents upon request by FNESS-ISC (e.g. invoices/timesheets).

Fuel management prescriptions developed under the *On-Reserve Operational Fuel Treatment Program* must be prepared using the 2019 Fuel Management Prescription Template

https://www.fness.bc.ca/downloads/fuel-management-prescription-template-doc.docx for review and approval by the FMS/L.

Operational fuel treatment projects can only proceed under an approved fuel management prescription. Plans or prescriptions prepared under these programs ***must*** be submitted for review and approval by the FMS/L prior to implementation in the field.

Submission of Final Reporting on the appropriate Final Report Template applicable to your funding.

10. Grant Management

Notice of Funding Decision

All applicants will receive written notice of funding decisions, which will include the terms and conditions of any grant that is awarded.

Revisions Required.

Please note that in cases where revisions are required to an application, or an application has been approved-in-principle only, the applicant has 30 days from the date of the written notice to complete the revision. Revisions that are not completed within 30 days may be closed.

Post-Grant Approval Meeting

All approved applicants must meet with the Fuel Management Specialist/Liaison (FMS/L), or designate, to discuss the approved project prior to commencing work. At this meeting, dates for quarterly reporting will be established.

Prior to commencement of any activity funded by these programs' applicants must collaborate with an FMS/L to prepare a detailed work plan which establishes milestones, timelines, quarterly reporting dates and a project inspection schedule.

Project Term

All approved *On-Reserve Operational Fuel Treatment Program* projects are to be completed within two years of approval. This extended timeframe is intentionally designed to facilitate surface fuel cleanup over two snow-free periods.

All *On-Reserve FireSmart™ Program* projects are to be completed within one (1) year of approval.

11. Transparency

To ensure transparency and accountability in the expenditure of public funds, all other financial contributions which cover 'eligible costs' of a project must be declared and, depending on the total value, may decrease the value of the grant awarded under the ISC program. Grant deductions will be made for any project that generates revenue (e.g. sale of forest products) generated from ISC funded projects.

12. Final Report Requirements & Process

Required Final Report Contents

Final report templates for both programs are available at ~~https://www.fness.bc.ca/core-programs/forest-fuel-management/indigenous-services-canada-isc~~
https://www.fness.bc.ca/core-programs/mitigation/indigenous-services-canada-isc

Applicants are required to submit one electronic copy of the complete final report with all supporting documents listed therein.

Final reports must include the following:

On-Reserve Operational Fuel Treatment Program Projects

- Completed Final Report Form, including signatures by the authorized Band signatory and a Registered Forest Professional that certifies all works completed are consistent with the objectives of the fuel management prescription for the project.
- Completed Final Report Form must detail all actual expenses incurred. Cost overruns or efficiencies are of interest to FNESS and inform future program development. Grant payments will be capped to the limits specified in your approved application and approval letter. FNESS-ISC reserves the right to request and review final expenditure reports.
- Post-treatment Wildfire Threat Assessment Worksheets with threat plot photos from same location as pre-treatment assessments.
- Georeferenced PDF maps. See Appendix 1 - Map Requirements
- Spatial data, metadata and methodology relating to the project. See Appendix 2 – Spatial Data Requirements (Operational Fuel Treatment Prescriptions and/or Treatment Final Reporting)
- Approved prescription (new or amended) that is signed and sealed by a Registered Forest Professional with all ancillary assessments (e.g. terrain stability, archaeology).

On-Reserve FireSmart™ Program Projects

- Completed Final Report Form with all required attachments.
- Completed Final Report Form must detail all actual expenses incurred.
- FNESS-ISC reserves the right to request and review final expenditure reports.
- For FireSmart™ projects a georeferenced PDF map or .kml/.kmz or shapefiles of treatment area(s) and structures affected.
- Pre- and post-treatment photographs. A minimum of 4 pre- and post-treatment photographs is required.
- Commentary on compliance/conformance with FireSmart™ standards, a summary of the work completed and the degree of success in meeting the application targets and applicable standards.

Submission of Final Reports
Forest Fuel Management Department, First Nations' Emergency Service Society.
Email: kalexandre@fness.bc.ca

Review of Final Reports
FNESS will perform a review of all final reports to ensure the required report elements (identified above) have been submitted.

13. Payments

Payments under the **FNESS-ISC *Operational Fuel Management Program*** will be based on net area treated. No payment will be made for No Work Zones or other area net-downs (i.e. existing roads, building sites, utility rights-of-way) within the project area.
Total Amount Payable will be the product of Net Area (ha's) treated times the $/ha indicated in the application.

Progress Payments
FNESS-ISC *On-Reserve FireSmart™ Program*: Progress payments may be considered if appropriate rationale is provided, and expenditures confirmed.

FNESS-ISC *On-Reserve Operational Fuel Treatment Program*: Due to the multi-year nature of this program progress payments will be considered to a maximum of 75% of approved grant amount upon field verification of works completed. A map showing treatment area completed must be attached, and expenditures confirmed.

Deductions to Grant Amounts Payable

Revenue Generation
Revenues of any sort resulting from an approved *On-Reserve Operational Fuel Treatment Program* project shall be deducted from the eligible grant amount.

Other Grant Contributions
Where other grant programs fund 'eligible costs' under the ISC/FNESS program, described in Section 6, those grant amounts will be deducted from the eligible grant amount payable.

Documentation must be available to demonstrate how actual costs from other grant contributions are accounted for. For example, labour costs must include information on the number of hours worked, the hourly rate, and the eligible activity that was undertaken (e.g. 50 hours at $18/hour for chipping).

Under no circumstances will the ISC/FNESS grant result in payment of more than 100% of the eligible project cost (or net project cost in cases where revenue is generated).

For example:
Eligible project cost of $75,000.
Other Grant Contributions (for 'eligible costs' under this program) of $25,000.
Net Project Revenue of $15,000.
Maximum payable under FNESS-ISC Grant = $35,000.

Changes to Approved Projects

Approved grants are specific to the project as identified in the application, and grant funds are not transferable to other projects. Approval from FNESS will be required for any significant variation from the approved project. To propose changes to an approved project, approved applicants are required to submit:

- Description of the new or revised activities and area (if applicable).
- Description of new or revised expenditures.
- Written rationale for changes to activities and/or expenditures.
- Please note that the applicant may be required to submit an updated, signed application form.
- Changes to boundaries or activities may require amendment(s) to the approved timber permit issued by ISC. ISC can advise on the necessity for amendments.

Final Payments

Final grant payment will not be approved until all administrative, technical, and spatial data requirements have been met.

Progress payment requests must originate from the Band. Contractors and Consultants cannot submit requests on the Band's behalf.

14. Additional Resources

First Nations contact Forest Fuel Management Department at FNESS at 250-377-7600, toll free 1-888-388-4431, and/or email: kalexandre@fness.bc.ca

The currently acceptable 2012 and 2020 *Wildland Urban Interface Wildfire Threat* Assessments guides and worksheet are available at https://www.fness.bc.ca/core-programs/forest-fuel-management/indigenous-services-canada-isc

FireSmart™ Canada provides resources for home and private landowners, industry, and governments to lessen the effects of wildfire. For more information and to learn about the FireSmart Community Recognition Program, visit www.FireSmartcanada.ca

The Association of BC Forest Professionals provides multiple documents regarding the roles and responsibilities of forest professional that may be helpful when selecting a consultant or contractor to work with https://abcfp.ca/web/ABCFP/About_Us/Directory_Public.aspx

Definitions

Gross Area: The total of all area contained within your treatment boundary.

Net Area: The total of all treated area within your treatment boundary. All non-treated areas such as roads, home sites, Wildlife Tree or other No-Work Zones are to be deducted from the Gross area and *the resultant Net Area will be the basis of payment for the purposes of these programs.*

Dispersed non-treatment strata such as WTP, Danger Tree No-Work zones will be amalgamated and deducted from the Gross area if they exceed 0.2 hectares when amalgamated.

Linear features such as roads, non-forested right of ways, greater than 4m in width are to be netted out of the gross area.

First Nation reserve land: Land owned by a Treaty First Nation (as defined by the Interpretation Act) within treaty settlement lands, or land under the authority of an Indigenous National Government

Publicly, provincially and First Nations owned critical infrastructure: Assets owned by the Provincial government, local government, public institution (such as health authority or school district), First Nation or Treaty First Nation that are either:

- Identified as Critical in a FireSmart™ BC https://www.fness.bc.ca/downloads/firesmart-critical-infrastructure-assessment.pdf and/or
- recognized as essential to the health, safety, security or economic wellbeing of the community and the effective functioning of government (such as fire halls, emergency operations centers, radio repeaters, etc.)

Vegetation management: The general goal of vegetation management is to reduce the potential

wildfire intensity and ember exposure to people, infrastructure, structures, and other values through manipulation of both the natural and cultivated vegetation that is within or adjacent to a community.

Vegetation management can be accomplished through two different activities:

1. **Residential scale FireSmart™ landscaping**: The removal, reduction, or conversion of flammable plants (such as landscaping for residential properties, parks and open spaces) in order to create more fire-resistant areas in FireSmart™ Non-combustible Zone and Priority Zones 1, 2 and 3. Refer to the FireSmart Guide to Landscaping.
2. **Operational Fuel Treatments**: The manipulation or reduction of living or dead forest and grassland fuels to reduce the rate of spread and head fire intensity and enhance likelihood of successful suppression. For the purposes of these programs is generally situated outside of FireSmart™ Zone 2 and no further than 1 km from an on-reserve structure cluster.

Wildfire risk: A notional product of the Likelihood of a fire occurring, the likely behavior of such a fire and the potential impacts on lives and property.

Wildfire threat: The ability of a wildfire to ignite, spread, and consume organic material (trees, shrubs, and other organic materials) in the forest. The major components used to define wildfire threat are fuel, weather, and topography which break down further to:

- Fuel: loading, size and shape, arrangement (horizontal and vertical), compactness, chemical properties, and fuel moisture
- Weather: temperature, relative humidity, wind speed, and direction and rainfall
- Topography: slope (increase/ decrease rate of spread), and aspect (fuel dryness)

Wildland Urban Interface (WUI): As defined in the FireSmart™ Homeowners Manual, the wildland urban interface (WUI) is any area where combustible forest fuel is found adjacent to homes, farm structures or other outbuildings. This may occur at the interface, where development and forest fuel (vegetation) meet at a well-defined boundary, or in the intermix, where development and forest fuel intermingle with no clearly defined boundary. Historically in BC, the WUI was created by buffering the structure density class greater than 6 by a 2-kilometre buffer to represent a reasonable distance that embers can travel from a wildfire to ignite a structure.

WUI Risk Class (RC): The level of risk ("risk class") reflects the analysis of weighted PSTA threat components within the individual WUI Risk Class polygons. Five risk class ratings were applied to the WUI polygons, with "1" being a higher relative risk and "5" being the lowest relative risk.

Structure Density requirement: Applications will only be considered for treatments located within 1 kilometre of a structure cluster which satisfies the density requirement of at least 6 structures/square kilometre.

Appendix 1 – Map Requirements (Final Report)

On-Reserve Operational Fuel Treatment Program

Gross and net area treated must be clearly depicted on maps. Net treatment area excludes roads, no work zones, wildlife tree patches, utility right of ways, etc.

Applicants are required to submit two large format georeferenced PDF maps that clearly represent the treatment area(s) at a suitable scale.

The mandatory maps and minimum content of each are:

Overview Map:
General overview map of the project boundary in relation to communities and other major features and base data.

Treatment Unit Map with Tabular Area Summary:
Show project boundary and treatment units.

Wildfire threat class plot locations color coded by derived threat class.

Map must include a tabular area summary, by activity, using the following stand treatment activity codes:

The map should also include reference data such as roads, railways, transmission lines, pipelines, water bodies and rivers/creeks. PDF maps should be compressed to reduce unnecessary large file sizes.

Activity	Code
Tree Felling	TF
Juvenile Spacing	JS
Pruning	PR
Broadcast Burning	BB
Spot Pile Burning	SB
Piling	PI
Surface Fuel Collection	SFC
Tree Planting	PL
Debris Management (chipping, etc.)	DM
Debris Removal	DR
Tree Removal (sawlogs, firewood, etc.)	TR
Add activities as required	TBD

Both maps must contain:

- Descriptive title
- Scale (as text or scale bar)
- UTM Graticules on the margins
- North arrow
- Legend
- Operational treatment and GIS consultant company name
- First Nation band number
- Date

On-Reserve FireSmart™ Program

The *On-Reserve FireSmart™ Program* is designed to be supportive of communities and encourage fuel and structure mitigations around homes and other community assets. As such the reporting and mapping requirements are simplified.

The mapping expectation is for a simple polygon map created on Google Earth or other geo-spatial platform that permits importation of such a map into FNESS' spatial platform. The map should pinpoint individual structures which benefitted from treatment. No spatial metadata submission is required.

An example of a simple map generated on Google Earth is shown in Appendix 3 - FNESS-ISC On-Reserve FireSmart™ Program (simplified map example submission).

Appendix 2 – Spatial Data Requirements (Operational Fuel Treatment Prescriptions and/or Treatment Final Reporting)

To ensure consistency in reporting it is important to note that all area submissions are to reflect Net Area only.

Two options for capturing spatial data are acceptable to FNESS. Both are outlined below:

1. **Low Level GPS**

Spatial data collection and Maps generated by common hand held gps units capable of saving data in .gdb file format is a minimal expectation of the *ISC-FNESS On-Reserve Operational Fuel Treatment Program*.

1. All gps data must be savable and convertible for inclusion in a geo-referenced PDF (portable document format) submission.

To ensure data consistency all GPS devices must be set to the data collection conventions that follow:

The projection standard is NAD_1983_BC_Environment_Albers (EPSG:3005).
Datum: NAD83, based on the GRS80 ellipsoid.

Track naming convention

All submitted GPS tracks should be easily identifiable by including community name, Treatment Unit ID (TU ID), and a brief description of the GPS tracked attribute. Examples follow:

<First Nation Community>_<Treatment Unit ID>_ <Track Description>

Operational Fuel Treatment Naming Examples:

- Tk'emlúps_TreatmentUnit 1A_Boundary
- Tk'emlúps_TreatmentUnit7C_NoWorkZone

Prescription naming Example:

- Tk'emlúps_PrescriptionUnit5B_Boundary
- Tk'emlúps_PrescriptionUnit1A_NoWorkZone

Data Quality: GPS Tracks not following proper naming conventions will not be accepted.

Submission: Properly named GPS tracks must be emailed to FNESS kalexandre@fness.bc.ca.

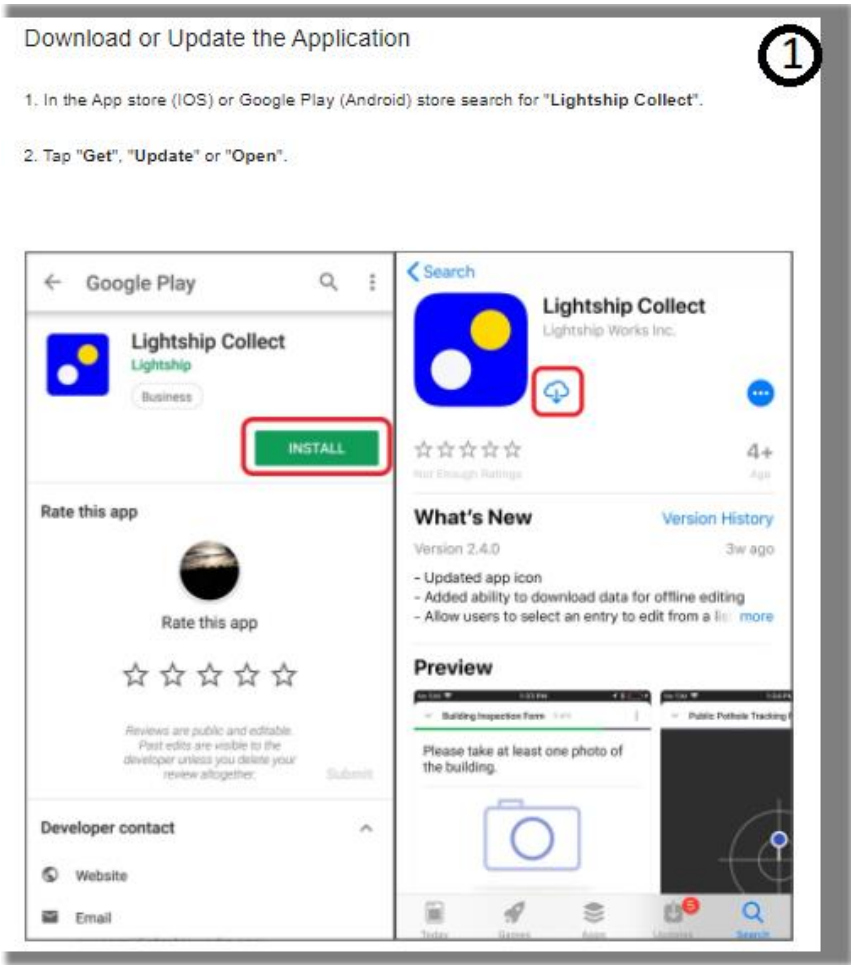
2. **Lightship Fuel Treatment Area Form**

FNESS has adopted a proprietary digital data capture and mapping tool that can be used to capture and transmit spatial data. The new Lightship Collect method is outlined below. Using the Lightship method will allow for an easier spatial submission for those familiar with or willing to adopt the new system.

Data can be collected and generated via 'Lightship Forms'. A form has been created for projects under the ISC-FNESS programs and can be completed via an iPhone app. This Lightship form will be designed to capture treatment unit field data and convert it into appropriate spatial data standards to meet ISC criteria set out in the 2021 program guide.

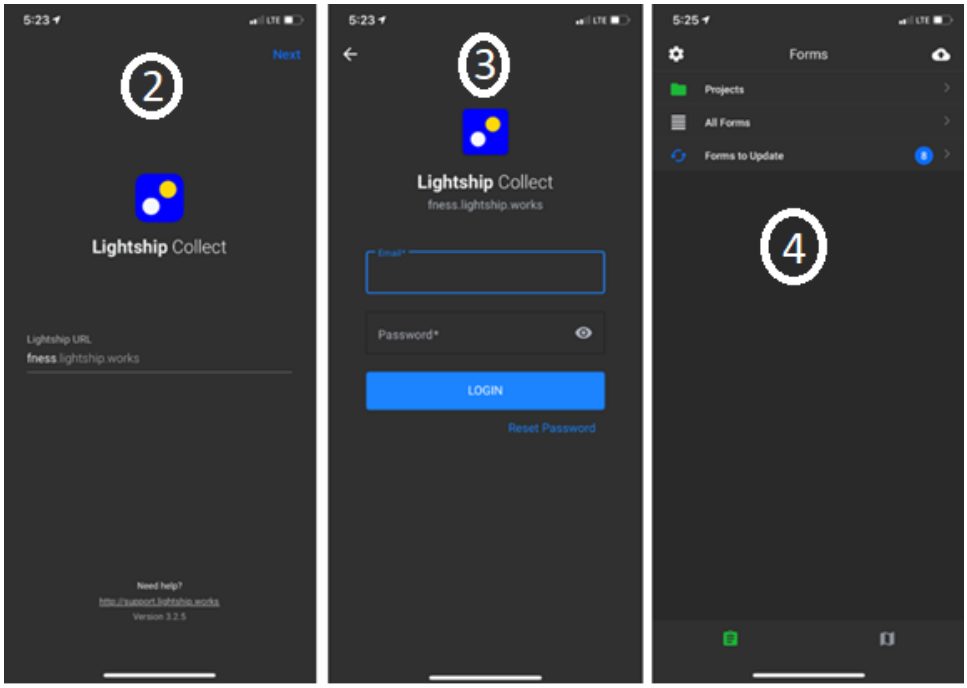
The initial Lightship Collect application download screen can be found below. See below for screen by screen instructions in using the FNESS method for spatial data collection on an iPhone.

Start off by downloading the lightship collect application from the app store on your cell phone, tablet, or other device https://support.lightship.works/hc/en-us/articles/206382368-Overview-Lightship-Collect

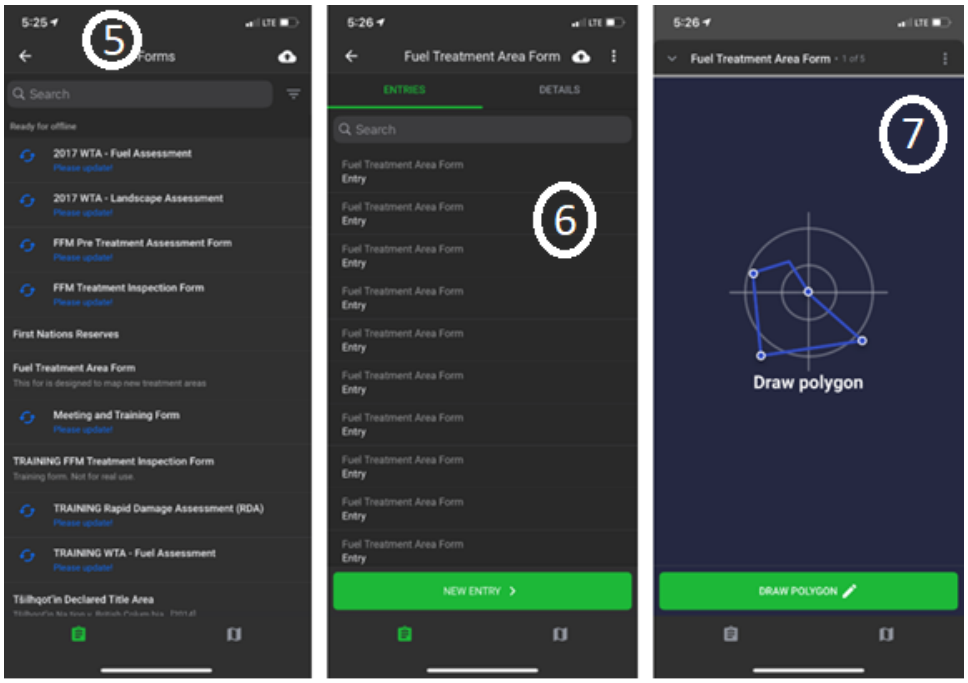


1. Enter your site name (i.e. FNESS.lightship.works) and tap 'Next'.
2. Enter your email, Enter your password & Tap "LOGIN".
   a. For additional support please check out the following link https://support.lightship.works/hc/en-us/articles/360024794632-How-to-Login-to-Collect
3. Choose All Forms

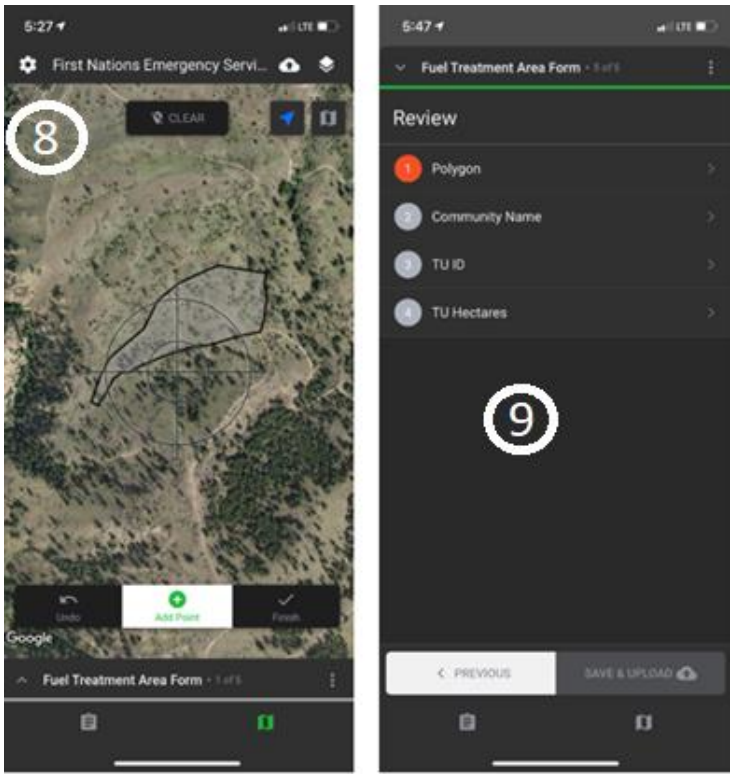
b. Please ensure required forms are updated prior to field use to ensure maximum effectiveness. This may be completed by clicking on the form of choice, and then clicking on the 3 vertical dots to download the update. https://support.lightship.works/hc/en-us/articles/115007306347-Using-a-Form-in-Collect



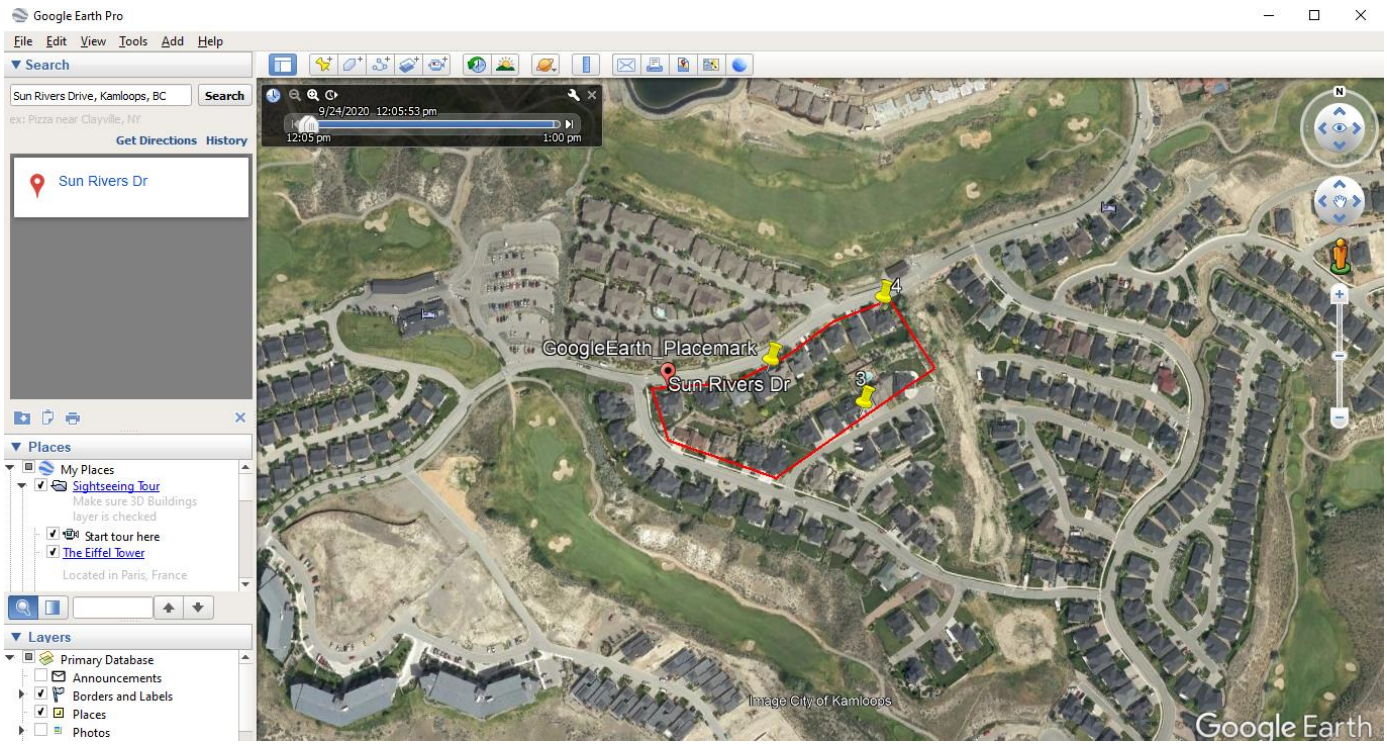
4. Choose Fuel Treatment Area Form
   a. This form was designed to capture polygon related information. For example, a fuel treatment boundary, wildlife tree patch, etc. This information will be utilized to develop spatial data for the project.
5. Select New Entry
6. Start Drawing Polygon
   a. Drop points as you walk through the area. Simply align the target on your blue dot location and drop a new point. The more points you drop, the better the spatial accuracy will likely be.
   b. If you are working in an area with poor cell reception, a geo-referenced PDF map can be created on Lightship ahead of time for use in the field. https://support.lightship.works/hc/en-us/articles/206616497-How-to-Print-a-Map Additionally, pre-loading the map can also help to improve accuracy. https://support.lightship.works/hc/en-us/articles/360000903471-How-to-Use-PDF-Layers-Offline



7. Once the polygon is drawn, please complete the associated form questions.
   a. Form question may vary slightly, but they will be designed to ensure efficiency
8. Once all the questions are answered please save and upload the polygon
   a. Please repeat the same process if there are other polygons present (ex. No work zone, riparian area, etc.)



Appendix 3 - FNESS-ISC On-Reserve FireSmart™ Program (simplified map example)



Structures Treated identified by pins. Pins of various colours can be employed to illustrate treatment differences if desired.

The FireSmart™ Area of Interest is shown by a red outline created with the 'Polygon' tool in Google Earth.

The pin and polygon data can be plotted like above and the map and raw .kmz/.kml data sent to us via e-mail kalexandre@fness.bc.ca.