## RESULTS INFORMATION SUBMISSION SPECIFICATIONS

**Form and Manner of Reporting**
The Forest Investment Program

**Edition 4**

**July 2024**

## FOREWORD

This document was developed to provide guidance for reporting activities funded under the Forest Investment Program (FIP).  This document contains information submission specifications which pertains to what is required in each electronic submission or submission entry field. For more details on business requirements and 'how to', users can access specific topic related training modules on the [RESULTS](#) website.  Separate RISS documents are available for Licensee reporting requirements and other Government Funded Programs requirements, including Wildfire Risk Reduction, Restoration & Conservation, Forest Enhancement Society of BC, and FRPA s108 and s107.

## ACKNOWLEDGMENTS

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## 1. PURPOSE

This guide summarizes requirements for preparing and submitting information pertaining to the Ministry of Forests (FOR), Forest Investment Program (FIP) administered by the Forest Investment and Reporting Branch (FIRB) under the Office of the Chief Forester. FIP funds reforestation on areas impacted by pest, drought and wildfires, conducts fertilization, fibre utilization and road rehabilitation projects on Crown Land. Specific details on the silviculture activities funded under the FIP can be provided by FIRB.

General user and formatting submission specifications, including field definitions, are summarized in the *RESULTS Information Submission Specifications - Licensee Submissions* (RISS-ls) document.

Submission specifications for all other government funded programs are summarized in the *RESULTS Information Submission Specifications – Government Funded Programs* (RISS-gf) document. This includes, Habitat Enhancement, Restoration & Conservation, Wildfire Risk Reduction, Forest Enhancement Society of BC, FRPA s.107 Declarations and FRPA s.108 Applications.

- Information on how to use RESULTS is found on the RESULTS website.
- Access to RESULTS is governed by the RESULTS Access Policy (expand the relevant section under Application Access on the above website); and,
- RESULTS training material and documentation, including pre-recorded sessions are also available.

## 2. REPORTING TIMELINES

All planting activities funded by FIP must be submitted to RESULTS on or before November 30. All other silviculture activities funded by FIP must be submitted to RESULTS on or before March 31.

## 3. APPLICATION

This guide provides direction to individuals who submit silviculture data to RESULTS as part of the FIP in accordance with FOR contractual agreements.

Sections 6 to 11 of this document provide information on general RESULTS submissions including opening definition, stocking standards, denudation, planned and completed activities, and forest cover.

Sections 12 to 18 include specific information for the following activities:
Section 12. Guidance for Managing Large Disturbance Areas (Wildfire & Pest)
Section 13. Fertilization for Stand Enhancement
Section 14. Juvenile spacing
Section 15. Road Rehabilitation
Section 16. Residual Fibre & Burning Avoidance
Section 17. Aerial Application for Insect Defoliators

Section 18. 2 Billion Tree Program Funded Directly by Federal Government

Sections 19 and 20 cover data discrepancies and quality assurance.

## 4. INTRODUCTION

RESULTS tracks silviculture information on the land base by managing submissions of opening definitions, disturbances, silviculture and habitat activities, forest cover and obligation declarations as required by *FRPA, FPPR* and the *Woodlot Licence Planning and Practices Regulation (WLPPR).*

RESULTS also tracks the following:
- Government funded activities on managed natural disturbance stands;
- Government funded activities on any free growing stands with previous licensee silviculture obligations;
- Government funded activities where the licensee is insolvent;
- Government funded activities on GAR mitigation openings;
- Forest Enhancement Society of BC (FESBC) funded projects with an on-the-ground component;
- Government funded fertilization activities;
- Wildfire Risk Reduction funded activities;
- Habitat Restoration, Enhancement and Conservation activities; and
- Federal Government funded reforestation activities.

RESULTS stores the following information:
- Opening definitions;
- Standards units and associated stocking standards;
- Disturbance (e.g. harvest, natural disturbance, etc.), silviculture, wildfire risk reduction and habitat activities and surveys;
- Forest cover and land status summary;
- Milestone declarations (regeneration and free growing);
- Standard unit modification history;
- Forward planning;
- Spatial data such as opening, standard units, disturbance activities, silviculture activities and forest cover;
- Comments relevant to the history of the opening; and
- Attachments: 'mandatory' information pertinent to the management of the openings.

The information supplied to RESULTS is used to:
1. Calculate statistics that support the provincial allowable annual cut allocations as part of the provincial timber supply review.
2. Support reporting on Performance Measures identified in the FOR *Annual Service Plan Report*.
3. Supply statistics for the BC State of Forest Investment Reporting.
4. Update the provincial forest inventory.

5. Update the fuel type inventory for use in the Provincial Strategic Threat Assessment.
6. Identify stands that are funded under Federal funding sources.
7. Provide spatial data for publication and use in the GeoBC/Data BC Catalogue.
8. Provide supporting documentation for calculation of greenhouse gas emissions.
9. Provide supporting documentation for completed work.
10. Monitor submitters for compliance with reporting requirements.

## 5.  ACCESS AND SUPPORT

### 5.1 AUTHORIZATION TO BC GOVERNMENT SYSTEMS

RESULTS and ESF systems are accessed by authorized users with either BCeID or IDIR accounts.  To be granted access to the RESULTS application, a user must complete two steps:
1. Register for a BCeID or IDIR account; and,
2. Apply for access to RESULTS (through the RESULTS Online Access Request Service).

BCeID and IDIR Accounts
> **BCeID** – an online service for private sector clients to securely access any BCeID participating British Columbia (BC) government website.  Register for a BCeID account for submissions relating to the FIP programs.  BCeID accounts are issued for most RESULTS submissions associated with government funded projects.
> **IDIR** – accounts are only issued to third party program administrators.

### 5.1.1 RESULTS Access

BCeID or IDIR account holders may apply for RESULTS access.  Access is granted via RESULTS Online Access Request.

Applicants are granted access to RESULTS after completion of RESULTS training and/or by demonstrating competency through online testing.  **Access is granted for 2 years as per current user access policy**.  On or before expiry date, the authorized user must re-apply to renew access.  Training modules and descriptions are available at Results Training and Resources.

### 5.2 SUPPORT

1. Reference materials are available on the RESULTS Business and Policy Documentation.
2. RESULTS support is available via the Business service desk NRSenquiries@gov.bc.ca
3. Results Technical Documentation

## 6. GENERAL DATA SPECIFICATIONS

General user and formatting submission specifications are found in the RESULTS Information Submission Specifications - Licensee Submissions.  This document specifies additional content requirements and FOR policy applied to submissions related to FIP funded activities.

### 6.1 OPENING CATEGORIES

Opening Category Codes (**Error! Reference source not found.**) in RESULTS are meant to i dentify specific program areas and are based on program description, silviculture obligations, disturbance type and silviculture responsibility.

**Table 1 Opening Category Codes**

| Code | Description | Details |
|------|-------------|---------|
| **CONT** | Non-tenured agreements under **FIP and FESBC;** use NDFS if the activities are a result of a natural disturbance. Non-tenured agreements under the **federally funded 2 Billion Tree Program** (not administered by FOR). | This would include planting, stand conversion, habitat enhancement, stand rehabilitation or operational fuel treatments. |
| **EXCLU** | Openings excluded from Crown Managed Forests. | Openings within parks or other protected areas, openings on Federally managed land, or openings on Crown land that have been transferred to private ownership. |
| **FFTFLTC** | Forestry License to Cut. | FLTC, district administered. |
| **FFTITSL** | Innovative Timber Sale License.  The opening category will not change for FIP funded reforestation. | BCTS initiative, BCTS administered, restricted to the FIP program. |
| **FTMSL** | Forest Tenure – Ministry Silviculture Liability | Instances where a licensee has become insolvent, the opening is not free growing, and the Ministry is now managing the silviculture liabilities. |
| **NDAML** | Natural Disturbance – Area-based Major Licensee | Non-tenured post-87, fire, wind, severe drought, insect or disease attack in major licensee area-based tenures (excluding community forests and woodlots). |
| **NDCF** | Natural Disturbance – Community Forest | Non-tenured post-87, fire, wind, severe drought, insect or disease attack in community forest tenures. |
| **NDFS** | Natural Disturbance – Forest Service | Non-tenured post-87, fire, wind, severe drought, insect or disease attack in areas with no overlapping silviculture obligations. Includes under-planted stands (no overstorey removal). |
| **NDVML** | Natural Disturbance - volume-based Major Licensee | Non-tenured post-87, fire, wind, severe drought, insect or disease attack in major licensee volume-based tenures. |
| **NDWL** | Natural Disturbance - WL License | Non-tenured post-87, fire, wind, severe drought, insect or disease attack in woodlot tenures. |

| Code | Description | Details |
|------|-------------|---------|
| **NREQ** | **Areas not under tenure** where site plans or stand management prescriptions are not required. | Government, FESBC or FIP funded activities such as fertilization, juvenile spacing, and aerial defoliator spraying. |
| **SPEX** | Areas under tenure that are exempt from site plan requirements. | No reforestation or free growing obligations exist. SSS without free growing obligations. |

## 6.2  RECORD MANAGEMENT

### 6.2.1  Approval

Some FIP funded program submissions (e.g. amendments, stocking standards) may require Natural Resource District Manager approval.  The submitter should notify either the RESULTS Coordinator(s) of the applicable district(s) and/or the FOR Project Administrators after submitting items that require district approval, to ensure these documents are assessed and approved in a timely fashion.

### 6.2.2  Inter-Agency Number

The inter-agency field in RESULTS is designed to reconcile project completion with allocated funding.

For BCTS and District-administered silviculture activities use the project number from the FIP allocation letters as the inter-agency number.

For third-party administered silviculture activities use the unique identifier or project number provided by the third-party.

## 6.3  RESULTS DATA AND MAPPING STANDARDS

Data and mapping standards are described in [RISS-ls](#) and [RESULTS technical specifications.](#)

Professionals and non-professional staff who collect and prepare data for RESULTS submissions are expected to be familiar with data requirements and required precision and accuracy.

## 6.4  REPORTING TO NEW OPENING OR AN EXISTING FG OPENING

When RESULTS submissions are initiated, submitters must determine whether they submit to an existing opening (Section 6.4.1) or create a new opening (Section 6.4.2).

FIP funded projects will be reported to new openings except where they occur on existing FFTITSL openings or if a survey is completed and no treatment is recommended.

### 6.4.1  Existing FG Opening

Survey activities that are completed on large disturbance areas can be entered into existing FG openings if **No Treatment is Recommended** for the surveyed area.  However, the forest cover is **NOT** updated for the opening.

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**Please note that No UPDATES are to be carried out on existing free growing tenured openings or FG standard units within active openings.  Tenured openings include the following opening categories: <u>FTML, FTWL, FTCF, FTSBF, FTLEVY, FTNOLVY, or FTFSM.</u>**

**<u>This is critical to maintaining current forest cover on areas where silviculture obligations existed.</u>**

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### 6.4.2  New Opening (non-tenured and tenure)

New openings are created as non-tenured openings or tenured openings.

#### 6.4.2.1  Non-Tenured Openings

Non-tenured openings may be created for:

- Activities on FG tenured openings or FG standards units (see box above);
- Completed treatment(s) and/or disturbance(s) that span several openings;
- Treatments on unmanaged stands where the area is not under any form of tenure;
- Juvenile spacing activities;
- Road rehabilitation activities;
- Fertilization activities;
- Aerial Defoliator activities;
- FIP funded activities, except those that occur on FFTITSL openings.

Where new activities cover only a portion of an existing opening, it is preferable to create a new opening to avoid resubmitting existing forest cover for the untreated area. Non-tenured openings should only include the area being treated.  Do not include reserve polygons or areas not being treated.

Non-tenured openings must be created online in RESULTS using the "ADD" button at the bottom of the Opening Inquiry Screen.  Mandatory attributes for non-tenured openings include Opening Category, Gross Area and Approval Date (date of survey or current date). Previous stand history is not required. The Opening Id is provided once the opening is created, ensure the Opening Id is recorded for use in future ESF submissions and reporting.

#### 6.4.2.2  Tenured Openings

When a new tenure is created to complete harvesting activities, a new opening is created and subsequent activities are reported to that opening.  Tenured openings can be created using an ESF submission or online in RESULTS.

- **Forestry License to Cut (FLTC)**

  For all activities conducted on FLTCs under the FIP program, the opening category code FFTFLTC must be used. FIP surveys and other activities conducted over an area prior to the establishment of an FLTC are reported via non-tenured openings.

- **Innovative Timber Sale License (ITSL)**

  For reporting activities under ITSL that have a shared responsibility between BCTS and FIP:

  1. FIP surveys and other activities conducted over an area **prior to the establishment of an ITSL** are reported via non-tenured openings using opening category NREQ;
  2. BCTS initiates the ITSL and disturbance harvesting occurs;
  3. BCTS tracks the opening and disturbance in the Land Resource Manager (LRM) as if they hold the silviculture liabilities;
  4. BCTS creates a new RESULTS opening using **'FFTITSL' opening category** and supplies the opening definition, the standards units and associated stocking standards, the disturbance activity and denuded forest cover;
  5. Subsequent silviculture activities and updates (surveys, planting, forest cover updates, milestones, etc.) are reported to the FFTITSL opening created by BCTS (Step 4 above). FFTITSL is a viewable category and as such, the records will be available for other submitters to manage and update.

## 7. OPENING DEFINITION SUBMISSION

An opening must exist in RESULTS before other attributes or spatial data can be submitted. **Opening spatial submission and/or update is mandatory on all existing and new openings where forest cover is submitted.**

### 7.1 OPENING DEFINITION DATA REQUIREMENTS

Please refer to RISS-ls.

Where non-tenured openings are created to report activities on area-based tenures (i.e. TFLs, Community Forests, First Nations Woodland Licenses, and Woodlots), the following procedures must be followed when the opening is created:
  1. Include the License (Forest File ID - no cutting permits or blocks)
  2. Submit all fields in the Pre-Harvest Stand Label (Previous Stand Type, Species1, Age Class, Height Class, Stocking Class, Site Index and Site Index Source).

### 7.2 CHANGES TO OPENING DEFINITIONS

Occasionally, opening definitions may require updates because of changes to the landscape, new or better information or because of administrative changes (e.g. tenure information). RESULTS accommodates three kinds of changes to openings definitions:

1. **Spatial and Attribute Area Update:** to revise spatial boundaries and attributes of affected openings.
2. **Retire:** to permanently disable the opening from receiving further updates (the records associated with these openings are not deleted). History associated with the opening is archived. FOR staff with Approval authorisation may retire openings. **<u>Where a managed non-tenured opening (except fertilization) entirely overlaps one or more existing free growing openings, the free growing opening(s) must be retired.</u>**
3. **Delete:** to completely delete an opening record from RESULTS. History associated with the opening is permanently removed and is not archived. Candidate records for deletion are usually openings that were submitted in error. Deletions are completed with the assistance of NRS Application Service Desk staff.

## 8. STOCKING STANDARDS SUBMISSION

Stocking standards and Biogeoclimatic Ecosystem Classification (BEC) information are required for openings under FOR responsibility. While these areas have no legal obligations, the objective is to manage them like obligated areas under FRPA. Stocking standards are assigned to establish the regeneration and free growing milestones that enable the FOR to monitor reforestation progress.

Standard Units (SUs) are created through Opening Definition submissions where surveys or reforestation activities will occur within an opening. Where SUs are created only for submitting regeneration and/or free growing declarations, assign the SUs and associated stocking standards or stocking Standard IDs (SSIDs) based on the stocking and free growing survey parameters that were used to make the assessments.

Stocking standards are assigned to SUs as follow:

1. PREFERRED METHOD – Provincial Default Standards in accordance with the *Reference Guide for Forest Development Plan (FDP) Stocking Standards*. Data requirements in **Error! Reference source not found.** apply.
   - ✓ From FDP Stocking Standard document: the appropriate SSID that matches the desired stocking standards may be used for most government funded projects where the stocking standard is primarily based on BEC.

2. UNIQUE CIRCUMSTANCES – District-Approved Default or other FOR-Approved Standards
   - ✓ *Individual standards* may be loaded into RESULTS for given SUs in consultation with, and under the direction of, District silviculture staff and the FOR contract administrator. This may be desirable for stands with management objectives that are not reflected in the Provincial default standards in the *Reference Guide for Forest Development Plan Stocking Standards.* In this case, the stocking standards are sent to the RESULTS Inbox for District approval. Data requirements in Table 3 Minimum Stocking Standard Data Requirements for Silviculture Prescription Openings (no

SSIDs) apply.  Stocking standards for government-funded projects are <u>not</u> developed through the Forest Stewardship Plan Tracking System.

## 8.1  STOCKING STANDARDS DATA REQUIREMENTS

Depending on the option chosen to assign stocking standards, **Error! Reference source not found.** and Table 3 Minimum Stocking Standard Data Requirements for Silviculture Prescription Openings (no SSIDs) list mandatory information required for stocking standard submissions.  **SU Spatial is mandatory and can only be submitted via ESF.**

**Note that for Natural Disturbance (ND\*), NREQ, and SPEX opening categories, RG and FG milestone dates are calculated from the approval date of the opening, not the DN start date.  Offset years may need to be adjusted so that the milestone dates are appropriate for each SU.**

**Table 2. Minimum Stocking Standard Data Requirements for Site Plan Openings using SSIDs**

| Field | Details |
|---|---|
| Mapsheet & Opening No, Opening ID, Timber Mark/Cut Block; Licence/CP/Cut Block | Must use one of the mandatory keys used for RESULTS ESF Submission. |
| SU | A unique alphanumeric identifier. |
| Net Area to be Reforested (NAR) | Area in hectares must be > 0. |
| BEC fields | BEC zone, subzone, and site series. |
| SSID | Unique number in the *Reference Guide to Forest Development Plan Stocking Standards,* specific to ecosystems within each region, to which a specific set of stocking standards has been assigned.  When entered, all related stocking standards are automatically generated for the defined SU in RESULTS. |
| Spatial (Map) for areas that will receive treatment | SU boundaries must be provided in spatial submission (via ESF). **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |

**Table 3 Minimum Stocking Standard Data Requirements for Silviculture Prescription Openings (no SSIDs)**

| Field | Details |
|---|---|
| Mapsheet & Opening No, Opening ID, Timber Mark/Cut Block; Licence/CP/Cut Block | Must use one of the mandatory keys used for RESULTS ESF Submission. |
| SU | A unique alphanumeric identifier. |
| Net Area to be Reforested (NAR) | Area in hectares must be > 0. |
| Regen Offset | The end of the period, following the commencement date, by which a stand being established on the NAR must conform to regeneration stocking standards.  In RESULTS, this is an offset field called 'Regen'. |
| FG Offsets | The end of the period, following the commencement date, by which a stand being established on the NAR must conform to free growing stocking standards.  In RESULTS, the offsets fields are referred to as 'Early' and 'Late'. |
| Preferred Species/Minimum Heights | Preferred species and the minimum heights that must be attained by the preferred species in meters. |

| Field | Details |
|---|---|
| Acceptable Species/Minimum Heights | Acceptable species and the minimum heights that must be attained by the acceptable species in meters. |
| Target Stocking | Target number of trees per hectare of preferred and acceptable species. |
| Minimum Preferred and Acceptable Stocking | Minimum number of trees per hectare of preferred and acceptable species. |
| Minimum Preferred Stocking | Minimum number of trees per hectare of preferred species. |
| Max Conifers (stems/ha) | Maximum allowable stand density of total countable conifers, above which openings must be spaced down to a specified density of well-spaced preferred and/or acceptable stems/ha, to achieve free growing status. |
| Post Spacing (Min/Max) | Minimum and maximum density of well-spaced preferred and/or acceptable stems/ha to which the stand must be spaced to achieve free growing status. |
| Minimum Inter-tree Distance | Minimum allowable horizontal distance between trees in meters. |
| % Height Above Brush | Required minimum height of the tree above competing vegetation in a 1-meter radius, expressed as a percentage. |
| Comment | Required where applicable to expand or justify stocking requirements.  Select a standards comment type code, then type applicable comment related to stocking standards. |
| Spatial | SU boundaries must be provided in spatial submission (via ESF). **Roads and landings are not mapped, only the outer boundaries are to be submitted** |

## 8.2 MODIFICATIONS TO STANDARDS UNITS

Modifications to SUs and associated stocking standards are submitted into RESULTS via ESF if spatial updates are required.  If there are no changes to the spatial data, the updates may be submitted online.

**Changes to site plan openings,** which do not require approval, may be made through a site plan amendment.

Changes to **FOR Approved Stocking Standards** that do not require approval (NAR adjustment because of better available information) may be made via a minor amendment. Any other updates required to stocking standards must be submitted via a major amendment and will require approval.  **The correction functionality is only used to update erroneous information that is not consistent with the latest approved version of the prescription or submitted in error.**

## 9.  DISTURBANCE AND SILVICULTURE ACTIVITIES SUBMISSION

Data requirements are described for four activities: disturbance, surveys, planned treatments, and completed treatments.

## 9.1 DISTURBANCE DATA REQUIREMENTS

Fields in Table 4 are required with disturbance submissions.  Data fields not listed in the table are optional. **Disturbance reporting must be accompanied by forest cover updates that**

**include both spatial and attributes information.**  Disturbance activities may be reported online in RESULTS or through the ESF.

**Table 4. Disturbance Activity Data Requirements**

| Field | Details |
|---|---|
| Mapsheet & Opening No, Opening ID, Timber Mark/Cut Block; Licence/CP/Cut Block | Must use one of the mandatory keys used for RESULTS ESF Submission |
| Disturbance Code | As appropriate: <br> B (burned, wildfire) <br> E (stand enhancement) <br> F (flood) <br> I (slide) <br> L (logged) <br> P (pest – e.g. beetle) <br> R (rehabilitation) <br> S (salvage) <br> W (wind damage) |
| Disturbance Start Date | YYYY-MM-DD |
| Disturbance Completion Date | YYYY-MM-DD |
| Disturbance Area | In hectares |
| Silvicultural System | Required for projects that involve harvest activity.  e.g. CLEAR, CCRES, SELEC |
| Silvicultural Variant | Conditionally required for IMCUT, SEEDT, SELEC, SHELT. |
| Silvicultural Cut Phase | Required for projects (e.g. salvage) that involve harvest activity. e.g. REMOV, SALV |

## 9.2  SURVEYS (PLANNED OR COMPLETED) DATA REQUIREMENTS

Fields in Table 5 are required with planned or completed survey submissions.  Data fields not listed on the table are optional.  Submit survey submissions through an ESF submission since spatial is mandatory.

**Table 5. Survey Activity Data Requirements**

| Field | Details |
|---|---|
| Mapsheet & Opening No, Opening ID, Timber Mark/Cut Block; Licence/CP/Cut Block | Must use one of the mandatory keys used for RESULTS ESF Submission. |
| Base | SU |
| Technique | RE (Reconnaissance) <br> RG (Regen/Stocking) <br> RA (Regen Performance Assessment) <br> FG (Free Growing) <br> SU (Survival) <br> Or other appropriate code relevant to program requirement. |
| Method | PLOT <br> RECCE <br> WALK <br> Or other appropriate code relevant to program requirement |
| Activity Status Indicator (in RESULTS) | Set to 'Planned' or 'Complete' as appropriate. |

| Field | Details |
|---|---|
| | *Some ESF submission software has an Actual Date Indicator instead of an Activity Status indicator. In the case of a 'yes' or 'no' indicator.* <br> • *Set to 'no' if the survey is planned.* <br> • *Set to 'yes' if the survey has been completed.* |
| Activity Date (Planned or Completion Date) | YYYY-MM-DD.  Date of the planned or completed survey. <br> For ESF submission software that does not have an 'Activity Status' indicator: <br> • If *Actual Date Indicator* is set to 'no' this the planned commencement date for the survey. <br> • If *Actual Date Indicator* is set to 'yes', this is the date on which the survey was completed. |
| Funding Source | FIP |
| Net Area Treated | Areas surveyed, in hectares |
| Cost | Not required |
| Inter-agency No. | See Section 6.2.2 |
| Activity Spatial | Mandatory **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Attachments | Survey documents must be attached to the opening |
| Forest Cover | Forest cover updates, both attribute and spatial, are required based on survey technique or as specified by program area. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |

## 9.3 PLANNED TREATMENTS DATA REQUIREMENTS

Forward planning to free growing, using planned activities, is required for FIP treatment areas. The fields in **Error! Reference source not found.** are required for planned treatment s ubmissions, all other data fields are optional.  Submit planned treatment submissions through an ESF submission since spatial is mandatory.

**Table 6. Planned Treatment Data Requirements**

| Field | Details |
|---|---|
| Mapsheet & Opening No, Opening ID, Timber Mark/Cut Block; Licence/CP/Cut Block | Must use one of the mandatory keys used for RESULTS ESF Submission. |
| Activity Base <br> Activity Technique <br> Method | Select appropriate codes for the planned activity.  At a minimum, include Activity Base.  For complete list of valid codes and associated descriptions please refer to the code tables in the [Forest Investment Program RESULTS Codes](). |
| Activity Status Indicator (RESULTS) | Set status to 'Planned'. <br> *(Note:  Some ESF submission software has an 'Actual Date Indicator' instead of an Activity Status indicator.  In this case, for planned data, set Actual Date Indicator to 'no'.)* |
| Planned Date | YYYY-MM-DD (planned commencement date of activity) |
| Funding Source | FIP |
| Treated amount | Planned number of hectares proposed for treatment. |
| Planned Cost | Not required |
| Spatial | Mandatory.  **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |

## 9.4 COMPLETED TREATMENTS DATA REQUIREMENTS

Fields in Table 7 are required with completed treatment submissions. Data fields not listed in the table are optional. Transmit completed treatment submissions through an ESF submission since spatial is mandatory. **Forest cover submissions with spatial information accompany completed treatment submissions**.

**\*Note: in order to avoid creating orphan records, when reporting previously planned activities, please ensure the planned records and associated attributes are updated to complete.**

**Table 7. Completed Activity Data Requirements**

| Field | Details |
|-------|---------|
| Mapsheet & Opening No, Opening ID, Timber Mark/Cut Block; Licence/CP/Cut Block | Must use one of the mandatory keys used for RESULTS ESF Submission |
| Base Technique | For complete list of valid codes and associated descriptions please refer to the code tables in the Forest Investment Program RESULTS Codes. |
| Activity Status Indicator (RESULTS) | Set status to 'Complete'. *(Note: Some ESF submission software has an 'Actual Date Indicator' instead of an Activity Status indicator. In this case, for activity completion data, set Actual Date Indicator to 'yes'.)* |
| Activity Completion Date | YYYY-MM-DD |
| Funding Source | FIP |
| Treatment Cost | Not required |
| Net Area Treated | Area treated, in hectares |
| Inter-agency No. | See Section 6.2.2 |
| Activity Spatial | Mandatory. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Forest Cover | Forest cover updates are required with all government funded programs where a treatment and/or activity results in a change in forest cover attributes. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |

**Table 8. Completed Planting Activity Data Requirements**

| Field | Details |
|-------|---------|
| Base | PL |
| Technique | FP (Fill Planting) PL (Planting) RO (Roadside) RP (Re-Planting) RR (Road Rehab) *See below on technique definitions.* |
| Method | CTAIN (Container) UNDER (Planting trees beneath fire killed overstory) WHIPS (Whips) |
| Species | See RESULTS species code list |

| Field | Details |
|---|---|
| Number Planted | |
| Number Beyond Transfer Limit | |
| Lot | Seedlot must exist in the Seed Planning and Registry (SPAR) database and must match the species. |
| Request ID | Mandatory for all Government Funded programs. <br> *Note: the Request ID can only be supplied in RESULTS online as field is not part of the ESF schema.  When entering the Request Key online, the Species and Lot fields are automatically populated |
| CBST Indicator | A "Yes" or "No" indicator. <br> Set to "Yes" if a seedlot-veglot is planted in an allowable Climate Based Seed Transfer (CBST) area of use as identified in the "CBST Areas of Use for British Columbia" document located at the Chief Forester's Standards for Seed Use website at https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/tree-seed/legislation-standards/chief-forester-s-standards-for-seed-use <br> **Note:** the CBST indicator field is not part of ESF schema. CBST will default to "No" for ESF submissions and can be updated to "Yes" online in RESULTS. |
| Spatial | Activity spatial is mandatory for all PL activities completed under all funding sources. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |

**Planting technique code usage:**
- **PL - Planting Density >=80% of FG Target stocking. First Plant on site.**
- **RP - Replant - Planting Density >=80% of FG Target Stocking. Previously planted**
- **FP - Fill-plant - Planting Density <80% of FG Target Stocking. First plant on site or previously planted**

**If planting occurs on an understocked stand impacted by wildfire or insects, the planting method code UNDER must be used to report the activity.**

## 10.  FOREST COVER AND MAP SUBMISSION

Forest cover updates are required with all government funded programs where a treatment and/or activity results in a change in forest cover attributes.  The only exception is if the understory is modified but the overstory as reported in the most recent inventory is unchanged.

All forest cover updates must be submitted via ESF and must include both GML and XML data files (spatial and attributes) for the entire opening.

**When reporting new activities on an existing opening where forest cover updates are mandatory, forest cover must be reported for the <u>entire opening</u> even if the treatment or survey only covers a portion of the opening.  All untreated polygons must accompany the forest cover update since it is a complete delete and replace.**

## 10.1 POLYGON COMPONENT DATA REQUIREMENTS

Polygon component fields in Table 9. Forest Cover Data Requirements: Even-Aged and Multi-Layer Stands. Polygon Component are required with forest cover submissions.  For reserve polygons where the forest cover has not changed since the last inventory, only the attributes and spatial shown in Table 9 are submitted.

**Table 9. Forest Cover Data Requirements: Even-Aged and Multi-Layer Stands. Polygon Component**

| Field | Details |
| --- | --- |
| SU label | Required only for IMM, MAT or NSR polygons that are located within an SU. |
| Polygon ID | Required |
| Gross Area | Area of the polygon. |
| Reference year | Year of survey. |
| Reserve Type | Group (G), Dispersed (D).   Required if reserves (long-term or short-term) exist within the polygon. |
| Reserve Objective | BIO (Biodiversity), WTR (Wildlife Tree Retention), CHR (Cultural Heritage Resource), TIM (Timber Management), VIS (Visual), etc.  For complete list of valid codes and associated descriptions please refer to the code tables in the RESULTS technical specification. |
| Site Index | Required |
| Site Index Source | Select appropriate code. |
| Stocking status | Select appropriate code. |
| Stocking type | Select appropriate code. |
| Spatial location of each forest cover polygon (GML) | Load through ESF. |
| Non-mapped area | Conditional - Include areas (ha) that should be taken out of the productive forest area (NAR) but are too small to map (< 0.1ha) but should be accounted for as well as roads and landings if they are not mapped.  Consists of four components: ID, area, stocking status and stocking type. |

## 10.2 EVEN-AGED STANDS DATA REQUIREMENTS

Inventory component data is required for all even-aged stands except reserves (Table 10).  Silviculture component data (Table 11) is required for even-aged stands when differences exist between inventory and silviculture forest cover.  Even-aged inventory and silviculture component data may be combined into the inventory component if no significant differences exist between species composition in the silviculture (crop trees) and inventory (all trees) components; that is, if the stand inventory consists almost entirely of preferred and acceptable crop trees.

**Table 10. Forest Cover Data Requirements: Even-Aged Stands Except Reserves. Inventory Component**

| Field | Details |
| --- | --- |
| Layer Component | Component = I.  Inventory component. |
| Crown Closure | The percentage of ground area covered by the vertically projected crowns of the tree cover for each inventory component tree layer within the polygon. Required if tree species are entered. |
| Basal Area | Average cross-sectional residual basal area (m$^2$) per hectare of all stems ≥ 12.5 cm diameter at breast height (dbh: 1.3 m). <br> • Required if BA is part of stocking requirements |

| Field | Details |
|---|---|
| | • Required for commercial thinning or intermediate cuts where BA is used to assess post-harvest stocking requirements<br>• Required where the BA of dispersed stems is $> 5$ m$^2$ per hectare<br>• Not required for even-aged stands, except if prescribed as an even-aged partial or intermediate cut |
| Total Stems/ha | Total number of live stems per hectare within the forest cover polygon, excluding germinants.<br>Required if tree species are entered |
| Species | Code representing the tree species (primary, secondary, tertiary) within the polygon. |
| Species % | Estimate of given inventory component tree species percentage within the polygon. The sum of all species in the inventory component must equal 100. Each species should be rounded to the nearest 1%. Required if species are entered in the inventory component |
| Average Species Age | The reported age is an average of the inventory sample ages of the species.<br>Regeneration delay surveys: Required for the leading species.<br>Free growing surveys: Required for the leading and secondary species. |
| Average Species Height | The reported height is an average of the inventory sample heights of the species.<br>Height is expressed in metres to 1 decimal place. E.g., 4.1 m<br>Regeneration delay surveys: Required for the leading species.<br>Free growing surveys: Required for the leading and secondary species |
| Damage Agent | Required where stand has been damaged. |
| % Incidence of Damage Agent | Required if damage agent present. |
| Area Affected by Damage Agent | Required if damage agent present. |

**Table 11. Forest Cover Data Requirements: Even-Aged Stands Except Reserves. Silviculture Component**

| Field | Details |
|---|---|
| Layer Component | Component = S. Silviculture component. |
| Total Well Spaced Stems/ha | Total number of well-spaced stems per hectare. Stem density for silviculture layer disregarding the M-value. Trees are preferred or acceptable species, and well-spaced using the minimum inter-tree distance in the stocking standards (as defined by the Standards ID).<br>Required for all polygons within an SU |
| Well Spaced Stems/ha | Number of well-spaced stems per hectare. Stem density for silviculture layer using the M-value. Trees are preferred or acceptable species, and well-spaced using the minimum inter-tree distance in the stocking standards (as defined by the Standards ID).<br>Required for all polygons within an SU |
| Free Growing Stems/ha | Number of free-growing stems per hectare. Free-growing stem density for the silviculture layer (based on the M-value). Free-growing trees are healthy, preferred, or acceptable species, well-spaced, free from inhibiting brush, and meet or exceed the |

| Field | Details |
|---|---|
| | required minimum height (if applicable). Greater than or equal to the minimum stocking standard if SU is declared free-growing. Required for all polygons within an SU |
| Species | Code representing the tree species |
| Species % | Must total 100% for all species. |
| Average Species Age | The reported age is an average of the silviculture sample ages of the species |
| Average Species Height | The reported height is an average of the silviculture sample heights of the species. It is required for the leading silviculture species; it is optional for all other silviculture species. |

### 10.3  MULTI-LAYER STANDS DATA REQUIREMENTS

These specifications apply to forest stands that have more than one layer.  Four layers are recognized (Table 12):  mature, pole, sapling and regeneration.  Please refer to Table 10 and Table 11 above for multi-layer stands data requirement.

**Table 12. Forest Cover Layer Codes**

| Layer | Description | Details |
|---|---|---|
| 1 | Mature Layer – uneven-aged | Uneven-aged stand with trees ≥ 12.5 cm dbh – based on all commercial trees. |
| 2 | Pole Layer – uneven-aged | Uneven-aged stand with trees 7.5 cm to 12.49 cm dbh – based on all commercial trees. |
| 3 | Sapling Layer – uneven-aged | Uneven-aged stand with trees 1.3 m in height to 7.49 cm dbh – based on all commercial trees. |
| 4 | Regeneration Layer – uneven-aged | Uneven-aged stand with trees < 1.3 m in height – based on all commercial trees. |

Inventory component data is mandatory for multi-layer stands.  When reporting uneven-aged inventory and silviculture component, data may be combined into the inventory component report if no significant differences exist between species composition in the silviculture (crop trees) and inventory (all trees) components; that is, if the stand inventory consists almost entirely of preferred and acceptable crop trees.

For reserves, follow procedures for *Submitting Forest Cover to RESULTS for Openings with Treed Retention.*

General information on multi-layer stands is in the RISS-ls or the *Silvicultural Systems Handbook for British Columbia* website.

## 10.4 ROADS

Permanent and temporary access structure (and other temporary structures such as landings) should be reported as non-mapped areas:

1) Permanent Access Structure: as (NP-RD)
2) Temporary Access Structures; as (NP-UNN)

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**\*Note: the stocking status of the temporary access structure may change from unproductive (NP-UNN) to NSR or IMM through the lifecycle of the opening as the road becomes rehabilitated and trees re-established.**

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# 11. DECLARATION SUBMISSION

Declarations for openings subject to government funded treatments or surveys are the same as for licence holders. Follow procedures for submitting declarations according to the RISS-ls.

If an area is declared stocked or free growing but does not meet the stocking standards in the given SSID because a decision was made that further treatment will not be done, a comment is added to the declaration stating that no further treatments are planned.

Fields in Table 13. Declaration Data Requirements are required with declaration submissions. Declaration fields not listed in the table are optional. Forest cover and spatial submissions must accompany declaration submissions. Submit completed declarations online in RESULTS or through the ESF. Forest cover updates are submitted through the ESF. Attachments of supporting documentation are submitted online in RESULTS.

**Table 13. Declaration Data Requirements**

| Field | Details |
|---|---|
| SU | Standards Unit ID to which the declaration relates. |
| Declaration type | Enter appropriate code:<br>RG = Regeneration<br>FG = Free Growing |
| Declared date | YYYY-MM-DD (not necessarily the same as submission date) |
| Comment | Include the name of the Registered Professional Forester who supervised the professional field assessments that support the declaration. Add comments as necessary to explain the declaration or to satisfy contractual requirements. |

## 12. GUIDANCE FOR MANAGING LARGE DISTURBANCE AREAS (WILDFIRE & PEST)

Wildfire and pest disturbances on Crown land are considered for treatment under FIP. These types of disturbances can impact large areas that have potential for treatment, however, not all portions of the area will be suitable for treatment.

Treatable areas and areas not suitable for treatment that have been surveyed are reported **separately** to RESULTS. Areas that will be treated with FIP funded silviculture activities must be reported to RESULTS in manageable sized openings under **200 ha** in size.

### 12.1 LARGE DISTURBANCE AREAS NOT SUITABLE FOR TREATMENT

"Suitability" will be defined through surveys and in discussions with local Ministry Designated Representatives and may include operability, impact of disturbance, sufficient return-on-investment, as well as other silviculture funding criteria.

Non-tenured openings created for areas determined to not be suitable for treatment can cover a large area that is not contiguous. Opening Spatial and Forest Cover are **NOT** provided. Activity spatial is required for all completed activities. These openings allow for the tracking of areas considered for treatment and avoid having an area assessed multiple times.

**Table 14. Data Requirements for Large Disturbance Aresa Reviewed but <u>NOT Suitable</u> for Treatment**

| Field | Details |
|---|---|
| **Opening Definition (non-tenured openings only)** | Create new non-tenured opening. New Opening will create Opening ID that will be used as the key for reporting by ESF. |
| Opening Category | NREQ |
| Opening ID | Automatically generated by RESULTS upon creation of opening |
| Opening Gross Area | **0.1 ha** (do not use total area surveyed) |
| Approval Date | Use the date of the wildfire disturbance |
| Spatial | **DO NOT** submit any opening spatial |
| | |
| **Stocking Standards Data Requirements** | Not required |
| **Disturbance Reporting** | Not required |
| **Completed Survey** | |
| Base | SU |
| Technique | RE (Reconnaissance) <br> RG (Regen/Stocking) <br> RA (Regen Performance Assessment) <br> FG (Free Growing) <br> BR (Brushing) <br> Or other appropriate code relevant to program requirement |
| Method | PLOT <br> WALK <br> FILE <br> DRONE <br> Or other appropriate code relevant to program requirement. |
| Completion Date | YYYY-MM-DD (date of survey completion) |
| Funding Source | FIP |
| Cost | Not required |

| Field | Details |
|---|---|
| Net Area Treated | Total area surveyed and is not suitable for treatment |
| Inter-agency No. | See Section 6.2.2 |
| Activity Spatial | Mandatory **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | Attach details regarding survey<br>If the surveyed area deemed not suitable, please add a comment to the activity indicating "Not suitable for Treatment" and any details pertaining the decision. |
| **Forest Cover Submission** | **DO NOT** provide Forest Cover |

## 12.2 LARGE DISTURBANCE AREAS SUITABLE FOR TREATMENT

Areas within large disturbances that are considered suitable for treatment are reported to RESULTS in manageable size openings that should be under 200 ha. If an area that will be treated is larger than 200 ha, it is recommended that the area be divided into separate openings that follow ecological units or natural landforms. This is recommended to ensure the integrity of the forest cover throughout the lifecycle of the opening.

**Table 15. Data Requirements for Large Disturbance Areas <u>Suitable</u> for Treatment**

| Field | Details |
|---|---|
| **Opening Definition**<br>**(non-tenured openings only)** | Create new non-tenured opening and report using Section 6.4.2.1, Table 1, Section 7, Section 9, and Section 10 with changes below. |
| Opening Category | NDFS |
| Opening Gross Area | The gross area that will be treated |
| Approval Date | Use the date of the wildfire disturbance |
| Spatial | Submit opening definition spatial |
| | |
| **Stocking Standards Data Requirements** | Required |
| **Disturbance Reporting** | DN B for wildfire<br>DN P for pest disturbance |
| **Completed Treatments** | |
| Base | For complete list of valid codes and associated descriptions please refer to |
| Technique | the code tables in the [Forest Investment Program RESULTS Codes](). |
| Method | |
| Completion Date | YYYY-MM-DD (date of survey or treatment completion) |
| Funding Source | FIP |
| Cost | Not required |
| Net Area Treated | Total area treated |
| Inter-agency No. | See Section 6.2.2 |
| Activity Spatial | Mandatory for all programs unless otherwise specified. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | Attach details regarding completed treatment |
| | |
| **Planned Activities** | Include all planned activities to FG, using the funding source code FIP. Required for all openings planted with FIP funded seedlings. |
| Activity Spatial | Mandatory. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| **Forest Cover Submission** | Forest Cover updates, both spatial and attribute, are mandatory for completed field-based activities including surveys. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |

## 13. FERTILIZATION FOR STAND ENHANCEMENT

The Forest Investment Program (FIP) funds fertilization of stands with good growth potential, to supplement anticipated timber supply shortfalls in some timber supply areas and increase growth rates and sequester atmospheric carbon at an improved rate. These treatments are mapped and tracked to monitor the investments.

### 13.1 REPORTING TO NON-TENURED OPENINGS

All FIP funded fertilization treatments (except time-of-planting fertilization) are reported to non-tenured openings and may overlap existing openings in RESULTS. Reporting by a non-tenured opening for fertilization allows for complete coverage of the entire assessed, treated, and planned area in one record. Fertilization treatment may be reported as a multi-part polygon but should fit within a resolution unit such as drainage or landscape unit so that the areas can be reviewed using existing FOR map viewing tools (e.g. Mapview or iMap). A non-tenured opening must not be in more than one TSA.

**Please note that when reporting fertilization activities using a non-tenured opening, the opening gross area supplied is always 0.1 ha and opening spatial must NOT be submitted.**

**\*Note: in order to avoid creating orphan records, when reporting previously planned activities, please ensure the planned records and associated attributes are updated to complete. If submitting new record, delete pre-existing associated planned record.**

### 13.2 FERTILIZATION ACTIVITY DATA REQUIREMENTS

Fields in Table 16 are required with fertilization treatment activity submissions to RESULTS. Fertilization at time of planting such as tablets and gro-max bags, is submitted as a fertilization activity in RESULTS.

**Table 16. Fertilization Data Requirements**

| Field | Details |
|---|---|
| **Opening Definition (Non-Tenured Opening Only)** | New Opening will create Opening ID that will be used as the key for reporting online by ESF. |
| Mapsheet Number | |
| Opening ID | Automatically generated by RESULTS upon submission. |
| Opening Category | NREQ |
| Opening Gross Area | Opening gross area must be set to **0.1 ha** to be used for fertilization activities and **do NOT supply opening spatial**. |
| Approval Date | Fertilization application date or date or pre-treatment assessment (YYYY-MM-DD) |
| Opening Status | IDIR Users: Set to 'FG'<br>BCeID Users: Set to 'APP' and contact district RESULTS Coordinator with request to reset Opening Status to 'FG'. |
| **Survey Activity (pre-treatment)** | ***Fertilizer Pre-treatment Assessment with map*** |
| Base | SU (Survey) |
| Technique | FE (Fertilization) |

| Field | Details |
|---|---|
| Method | PHOTO (Air Photo Interpretation) <br> PLOT (Plots) <br> WALK (Walkthrough) <br> HELI (Helicopter) |
| Objective | FE (Fertilization) |
| Funding Source | FIP |
| Completion Date | YYYY-MM-DD |
| Area Treated | Total surveyed area reviewed for fertilization treatment. |
| Actual Cost | Not required |
| Inter-agency No | See Section 6.2.2 |
| Activity Spatial | Mandatory. **Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | Attach details regarding survey assessments |
|  |  |
| **Planned** <br> **Treatment Activity** | *Immediate or Future Planned Fertilization Treatment (enter fertilization treatment if treatment is expected to be done within three years and a stand management prescription exists). If stands are suitable for fertilization but treatment will occur after three years, then indicate a follow-up survey for fertilization. Re-treatments do not need to be planned for as these areas will be based on areas previously treated.* |
| Base | FE (Fertilization) |
| Technique | CA (Chemical Air) or CG (Chemical Ground) |
| Method | HELI (Helicopter) <br> BPACK (Backpack Application) <br> GRANU (granular application) <br> TABLT (Fertilizer Tablet) <br> BAGS (Gro-Max Bags) |
| Objective | FE (Fertilization) |
| Funding Source | FIP |
| Planned Date | YYYY-MM-DD |
| Planned Area | Total planned eligible fertilization treatable area(s). |
| Planned Cost | Not required. |
| Activity Status Indicator (RESULTS) | Set status to 'Planned'. *(Note: Some ESF submission software has an 'Actual Date Indicator' instead of an Activity Status indicator. In this case, for activity completion data, set Actual Date Indicator to 'no'.)* |
| Inter-agency No | Not applicable for planned activities. |
| Activity Spatial | Mandatory. **Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | Attach details regarding future fertilization |
| **Completed** <br> **Treatment Activity** | *Completed Fertilizer Treatment* |
| Base | FE (Fertilization) |
| Technique | CA (Chemical Air) <br> CG (Chemical Ground) |
| Method | HELI (Helicopter) <br> BPACK (Backpack) <br> GRANU (Granular Application) <br> TABLT (Fertilizer Tablet) <br> BAGS (Gro-Max Bags) |
| Funding Source | FIP |
| Completion Date | YYYY-MM-DD |
| Area Treated | Total fertilization coverage area in hectares. |
| Treatment Cost | Not required |

| Field | Details |
|---|---|
| Inter Agency No | See Section 6.2.2 |
| Activity Spatial | Mandatory. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | Attach treatment details |
| | |
| **Survey Activity (post-treatment)** | *Fertilizer Post-treatment Assessment* |
| Base | SU (Survey) or AU (Audit) – as appropriate |
| Technique | FE (Fertilization) |
| Method | PLOT<br>PHOTO (Air Photo Interpretation)<br>WALK (Walkthrough)<br>HELI (Helicopter) |
| Objective | FE (Fertilization) |
| Funding Source | FIP |
| Completion Date | YYYY-MM-DD |
| Area Treated | Total surveyed area monitored for fertilization treatment |
| Treatment Cost | Not required |
| Inter-agency No | See Section 6.2.2 |
| Activity Spatial | Mandatory. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | Attach details regarding survey assessments |
| **Standards Unit** | |
| n/a | Not required.  'NREQ' opening category removes requirement for SU information. |
| **Forest Cover** | |
| n/a | Not required.  Spatial ATU maps provide for identification of these areas. |

## 14.  JUVENILE SPACING

All aspects of a juvenile spacing program from initial pre-treatment project area assessments to the treatment records, and post-treatment monitoring, are submitted to RESULTS. Submissions include required information listed in Table 17. Juvenile Spacing Data Requirements.  All opening submissions for juvenile spacing activities must have sufficient information to describe the treatment event and to determine impacts on higher level plans, silviculture, forest cover/land status, land use decisions and other local issues that may be impacted by those activities.  Figure 1 shows the workflow associated with juvenile spacing activities.
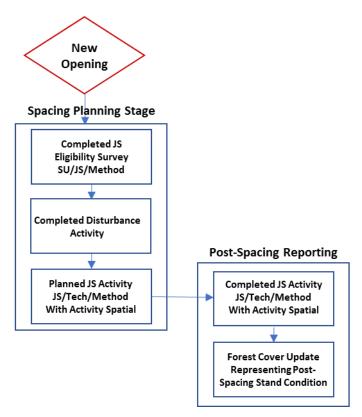
**Figure 1.  Juvenile Spacing Treatment Workflow**

## 14.1  REPORTING BY NON-TENURED OPENINGS

Juvenile spacing activities are reported as non-tenured openings on free growing (non-obligation) areas.  Using non-tenured openings allows for reporting of an entire surveyed, planned and treated area in one single opening.  **Please note that when using a non-tenured opening for juvenile spacing, opening spatial is mandatory.**

## 14.2  JUVENILE SPACING ACTIVITY DATA REQUIREMENTS

Fields in Table 17 are required with juvenile spacing treatment activity submissions to RESULTS.  Sections 10.2 and 10.3 outline data requirements for forest cover submissions for both even-aged and multi-layer stands.

**Table 17. Juvenile Spacing Data Requirements**

| Field | Details |
|---|---|
| **Opening Definition (shell openings only)** | New Opening initiated online will generate an Opening ID that will be used as the key for ESF reporting. |
| Mapsheet Number | |
| Opening ID | Automatically generated by RESULTS upon submission. |
| Opening Category | NREQ |
| Opening Gross Area | Must equal treatment area |
| Approval Date | Date of initial spacing eligibility survey (YYYY-MM-DD) |

| Field | Details |
|---|---|
| Opening Status | IDIR Users: Set to 'FG'<br>BCeID Users: Set to 'APP' and contact district RESULTS Coordinator with request to reset Opening Status to 'FG'. |
| Spatial | Spatial data representing treatment area. **Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| **Disturbance Activity** | Mandatory to allow Forest Cover updates |
| Silviculture System | Leave Blank |
| Silviculture Variant | Leave Blank |
| Silviculture Cut Phase | Leave Blank |
| Disturbance Code | E (Stand Enhancement) |
| Disturbance Start Date | Set to date of eligibility survey |
| Disturbance End Date | YYYY-MM-DD |
| Disturbance Area | Always use **0.1 ha** |
| | |
| **Eligibility Survey Activity (pre-treatment)** | *Juvenile Spacing Eligibility Survey* |
| Base | SU (Survey) |
| Technique | JS (Juvenile Spacing) |
| Method | PHOTO (Air Photo Interpretation)<br>PLOT (Plots)<br>WALK (Walkthrough)<br>HELI (Helicopter) |
| Objective | JS (Juvenile Spacing) |
| Funding Source | FIP |
| Completion Date | YYYY-MM-DD |
| Area Treated | Total surveyed area reviewed for juvenile spacing treatment |
| Treatment Cost | Not required |
| Inter-agency No | See Section 6.2.2 |
| Activity Spatial (GML) | Mandatory. **Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | Attach details regarding survey assessment or treatment plan |
| **Forest Cover** | |
| Conditional | Forest Cover updates are required for all ground surveys unless (a) no treatment is recommended or (b) there is a current (within the last 5 years) FG survey forest cover inventory label in RESULTS that still best describes the stand attributes. |
| **Planned Treatment Activity** | *Immediate or Future Planned Juvenile Spacing Treatment or additional treatment as identified in the stand management prescription (e.g. pruning). If stands are suitable for Juvenile Spacing but treatment will occur after more than three years, then indicate a follow-up survey for spacing.* |
| Base | JS (Juvenile Spacing) |
| Technique | MA (Manual) |
| Method | MANCT (Manual Cutting)<br>POWER (Power Saw) |
| Objective | JS (Juvenile Spacing) |
| Funding Source | FIP |
| Planned Date | YYYY-MM-DD |
| Planned Area | Total planned eligible juvenile spacing treatable area(s) |
| Planned Cost | Not required |
| Activity Status Indicator (RESULTS) | Set status to 'Planned'. *(Note: Some ESF submission software has an 'Actual Date Indicator' instead of an Activity Status indicator. In this case, for activity completion data, set Actual Date Indicator to 'no'.)* |

| Field | Details |
|---|---|
| Inter-agency No | Not required for planned activities |
| Activity Spatial | Mandatory. **Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | |
| **Completed Treatment Activity** | *Completed Juvenile Spacing Treatment* |
| Base | JS (Juvenile Spacing) |
| Technique | MA (Manual) |
| Method | MANCT (Manual Cutting) POWER (Power Saw, Brush Saw) |
| Objective | JS (Juvenile Spacing) |
| Funding Source | FIP |
| Completion Date | YYYY-MM-DD |
| Area Treated | Total spaced area in hectares |
| Treatment Cost | Not Required |
| Inter-agency No | See Section 6.2.2 |
| Activity Spatial | Mandatory. **Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | Must attach treatment prescription |
| **Forest Cover** | Mandatory. |
| **Survey Activity (post-treatment)** | |
| Base | SU (Survey) or AU (Audit) – as appropriate |
| Technique | JS (Juvenile Spacing) |
| Method | PHOTO (Air Photo Interpretation) PLOT (Plots) WALK (Walkthrough) HELI (Helicopter) |
| Objective | JS (Juvenile Spacing) |
| Funding Source | FIP |
| Completion Date | YYYY-MM-DD |
| Area Treated | Total surveyed area monitored for juvenile spacing treatment |
| Actual Cost | Not Required |
| Inter-agency No | See Section 6.2.2 |
| Activity Spatial | Mandatory. **Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments | Attach details regarding survey assessments |
| **Standards Unit** | |
| n/a | Not required |
| **Forest Cover** | Mandatory |

## 15.  ROAD REHABILITATION

All road rehabilitation completed under the FIP must be reported to RESULTS.  This includes all planting of seedlings or direct seeding of roads.

**Table 18. Road Rehabilitation Data Requirements**

| Field | Details |
|---|---|
| **Opening Definition (non-tenured openings only)** | **Create new non-tenured opening and report using Section 6.4.2.1, Table 1, Section 7, Section 9, and Section 10 with changes below.  One opening can include multiple sections of roads that are being rehabilitated and may be non-contiguous but must be within the same TSA.** |
| Opening Category | CONT |
| Opening Gross Area | The gross area that will be treated |
| Approval Date | Use the date of the initial survey |
| Spatial | Submit opening definition spatial.  Spatial must be a polygon. |
| **Stocking Standards Data Requirements** | Required.  If targeted stocking is outlined in the rehabilitation plan, the standard can be entered manually in RESULTS as an Amendment requiring District approval.  If standards are not defined, use the default SSID under Resource Practices Branch (HFP) for the appropriate biogeoclimatic subzone and site series.  Spatial is required. |
| **Disturbance Reporting** | Enter a DN "R" (Rehabilitation) with a disturbance area of **0.1 ha**.  Use the initial survey date as the disturbance date.  Do **NOT** include spatial. |
| **Completed Treatments** | |
| Base | For complete list of valid codes and associated descriptions please refer to |
| Technique | the code tables in the Forest Investment Program RESULTS Codes. |
| Method | |
| Completion Date | YYYY-MM-DD (date of survey or treatment completion) |
| Funding Source | FIP or other program funding source codes as necessary.  Please refer to the code tables on RESULTS online technical specification. |
| Cost | Not required |
| Net Area Treated | Total area treated |
| Inter-agency No. | See Section 6.2.2 |
| Activity Spatial | Mandatory. |
| Comments or Attachments | Attach details regarding completed treatment |
| **Planned Activities** | Include all planned activities to FG, using the funding source code FIP.  Required for all openings planted with FIP funded seedlings. |
| Activity Spatial | Mandatory. |
| **Forest Cover Submission** | Forest Cover updates, both spatial and attribute, are mandatory for completed field-based activities including surveys. |
| **Comments or Attachments** | Information regarding the rehabilitation should be attached to the RESULTS opening for future reference.  This includes rehabilitation plans, planting reports, completed surveys and maps of treated areas. |

## 16. ECOSYSTEM RESTORATION

Planting of shrub species may be funded by FIP and are tracked in RESULTS. The creation of a full opening is not required if the only activity is the shrub species planting since standards units and forest cover are not required. If the shrub species planting is completed in the same area as other government funded treatments, enter an Experimental (EP) activity in the existing opening with the activity attributes detailed below. For all shrub species planting EP activities provide details on the shrub species, number planted, and density in the activity comments. Also attach the planting prescription or a post-planting survey in the Attachments Tab, if available.

**Table 19. Shrub Planting Data Requirements**

| Field | Details |
|---|---|
| **Opening Definition (Non-tenured openings only)** | New Opening will create Opening ID that will be used as the key for reporting online by ESF. |
| Mapsheet Number | |
| Opening ID | Automatically generated by RESULTS upon submission. |
| Opening Category | NREQ |
| Opening Gross Area | Opening gross area must be set to **0.1 ha** to be used for aerial defoliator activities and **do NOT supply opening spatial**. |
| Approval Date | Application date (YYYY-MM-DD) |
| Opening Status | IDIR Users: Set to 'FG' <br> BCeID Users: Set to 'APP' and contact district RESULTS Coordinator with request to reset Opening Status to 'FG'. |
| Opening Spatial | Do not Submit Opening spatial |
| **Completed Planted Activity** | *Completed Planted Activity* |
| Base | EP (Experimental) |
| Technique | PL (Planting) |
| Method | CTAIN (Container) |
| Activity Objectives | Select best option to describe planting objectives. |
| Funding Source | FIP |
| Completion Date | YYYY-MM-DD |
| Area Treated | Total coverage area in hectares. |
| Treatment Cost | Not required |
| Inter Agency No | See Section 6.2.2 |
| Activity Comment | Enter details of the shrub species planted and number of seedlings/shrubs and/or density. <br><br> Activity comment is found in the activity details screen, click green "NO" and add new comment. |
| Activity Spatial | Mandatory |
| Attachment(s) | If a prescription or post-planting survey is available, attach it to the opening under the Attachments Tab. |
| Forest Cover | Do not Submit Forest cover |

## 17. RESIDUAL FIBRE AND BURNING AVOIDANCE

The Chief Forester expects that projects funded by the provincial government will seek every opportunity to utilize residual fibre associated with the forest activity to avoid unnecessary emissions from slash burning. Tracking of burning and residual fibre utilizations is necessary to support calculations of carbon offsets. These activities should be reported in the same RESULTS opening as the other activities associated with the FIP project.

**Table 20. Completed Fibre Utilization Activities**

| Field | Details |
|---|---|
| Mapsheet & Opening No, Opening ID, Timber Mark/Cut Block; Licence/CP/Cut Block | Must use one of the mandatory keys used for RESULTS ESF Submission |
| Base | SP |
| Technique | ME |
| Method | CHAUL (chip and hauling from site) BURY (bury surface fuels) CSCAT (chip and scatter) MULCH (mulching) |
| Activity Completion Date | YYYY-MM-DD |
| Funding Source | FIP |
| Treatment Cost | Not required |
| Net Area Treated | Area treated, in hectares |
| Inter-agency No. | See Section 6.2.2 |
| Activity Spatial | Mandatory. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Forest Cover | Not required |

**Table 21. Completed Burning Activities**

| Field | Details |
|---|---|
| Mapsheet & Opening No, Opening ID, Timber Mark/Cut Block; Licence/CP/Cut Block | Must use one of the mandatory keys used for RESULTS ESF Submission |
| Base | SP |
| Technique | BU |
| Method | PBURN (pile and burn) BROAD (broadcast burn) |
| Activity Completion Date | YYYY-MM-DD |
| Funding Source | FIP |
| Treatment Cost | Not required |
| Net Area Treated | Area treated, in hectares |
| Inter-agency No. | See Section 6.2.2 |
| Activity Spatial | Mandatory. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Forest Cover | Not required |

## 18.  AERIAL APPLICATION FOR INSECT DEFOLIATORS

Insect defoliators can impact multiple forest values.  The Ministry conducts operational treatments to decrease damage to host trees, reduce populations of insects harmful to human and animal health and to protect tree growth and survival for timber, wildlife and carbon values.

Provide the target insect damage agent code in the licensee activity id.  List of damage agent codes is available in the technical specification code tables.

Fields in Table 20 are required for aerial defoliator treatment activity submissions to RESULTS.

**Table 22. Aerial Defoliator Data Requirements**

| Field | Details |
|---|---|
| **Opening Definition (Non-tenured openings only)** | New Opening will create Opening ID that will be used as the key for reporting online by ESF. |
| Mapsheet Number | |
| Opening ID | Automatically generated by RESULTS upon submission. |
| Opening Category | NREQ |
| Opening Gross Area | Opening gross area must be set to **0.1 ha** to be used for aerial defoliator activities and **do NOT supply opening spatial**. |
| Approval Date | Application date (YYYY-MM-DD) |
| Opening Status | IDIR Users: Set to 'FG'<br>BCeID Users:  Set to 'APP' and contact district RESULTS Coordinator with request to reset Opening Status to 'FG'. |
| **Completed Treatment Activity** | *Completed Aerial Defoliator Treatment* |
| Base | PC (Pest Control) |
| Technique | CA (chemical Air) |
| Method | FIXED (Fixed Wing) or<br>HELI (Helicopter) |
| Activity Objectives | Mandatory.  ID (defoliator) must be included as the primary objective.  Other objectives can be used if needed as secondary and tertiary objectives. |
| Licensee Activity ID | Mandatory.  Use Damage Agent code for target defoliator species.<br>Example: IDW-Western Spruce Budworm, IDL – Western Hemlock Looper, IDT – Douglas-fir Tussock Moth, |
| Funding Source | FIP |
| Completion Date | YYYY-MM-DD |
| Area Treated | Total coverage area in hectares. |
| Treatment Cost | Not required |
| Inter Agency No | See Section 6.2.2 |
| Activity Spatial | Mandatory |
| Forest Cover | Not required |

## 19.  2 BILLION TREE PROGRAM FUNDED DIRECTLY BY FEDERAL GOVERNMENT

Individuals, First Nations and agencies can apply directly to the Federal Government for 2 Billion Tree projects and they identify candidate sites with proper consultations, acquire authorization, make all preparations such as procuring seed and seedlings, and establish site plans. Candidate stands on Crown Land must be referred to FOR staff to ensure that there is no potential for conflicts or overlap with existing plans.

RESULTS reporting is mandatory for all 2 Billion Tree project activities completed on Crown Land.  Reporting is completed based on the reporting requirements below.

**Table 23. External 2 Billion Tree Data Requirements**

| Field | Details |
|---|---|
| **Opening Definition (non-tenured openings only)** | Create new non-tenured opening and report using Section 6.4.2.1, Table 1, Section 7, Section 8, Section 9, and Section 10 with changes below. |
| Opening Category | CONT |
| Opening Gross Area | The gross area that will be treated |
| Approval Date | Date of initial treatment |
| Spatial | Submit opening definition spatial |
|  |  |
| **Stocking Standards** | Required.  Use Ministry default stocking standards for the appropriate Biogeoclimatic zone, subzone and site series.  **See Section 8 for stocking standard data requirements.** |
| **Disturbance Reporting** | DN B for wildfire<br>DN P for pest disturbance<br>DN E if no disturbance occurred (required for forest cover submissions)<br>Or other codes as applicable.<br>**See Section 9.1 for disturbance data requirements** |
| **Completed Treatments** |  |
| Base | For complete list of valid codes and associated descriptions please refer to |
| Technique | the code tables in the Forest Investment Program RESULTS Codes. |
| Method | **See Section 9.2 – Section 9.4 for survey and treatment data requirements** |
| Completion Date | YYYY-MM-DD (date of survey or treatment completion) |
| Activity Objectives | Mandatory. 2BT must be included as the primary objective |
| Funding Source | FED |
| Cost | Not required |
| Net Area Treated | Total area treated |
| Inter-agency No. | Not required |
| Activity Spatial | Mandatory.  **\*Roads and landings are not mapped, only the outer boundaries are to be submitted** |
| Comments or Attachments |  |
|  |  |
| **Planned Activities** | Include planned activities to monitor the stand to free-growing (FG), using the **funding source code FED** based on the schedule in Table 22 below.  Required for all openings planted with federally funded 2 Billion Tree Program seedlings. |
| Activity Spatial | Mandatory.  \*Roads and landings are not mapped, only the outer boundaries are to be submitted |

| Field | Details |
|---|---|
| **Forest Cover Submission** | Forest Cover updates, both spatial and attribute, are mandatory for completed field-based activities including planting and surveys. **\*Roads and landings are not mapped, only the outer boundaries are to be submitted.** <br> **See Section 10 for forest cover data requirements.** |

**Table 24. 2BT Planned Activity Schedule**

| Activity Type | RESULTS Base/Tech/Method | Years Post-Planting |
|---|---|---|
| Regen Survey | SU RG PLOT | 2 |
| Regen Assessment Survey | SU RA PLOT | 6 |
| Free-Growing Survey | SU FG PLOT | 12 |

## 20. DATA DISCREPANCIES

When data inconsistencies are found, forest professionals should contact the custodians of the data (e.g. licensees and/or district office for licensee-responsibility openings; district office for government-responsibility openings) to report their findings, so that the custodians may check and correct the data if required.

## 21. QUALITY ASSURANCE MONITORING

Submissions made to RESULTS under FIP and the Federal 2 Billion Tree Program are subject to data quality assurance monitoring. All submissions must be consistent with this guide and all submitters are responsible for any required updates identified by the quality assurance process.