

EXPLANATORY STATEMENT

Carbon Credits (Carbon Farming Initiative) Act 2011

Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Sequestration and Emissions Avoidance) Methodology Determination 2018

Background: Emissions Reduction Fund

The *Carbon Credits (Carbon Farming Initiative) Act 2011* (the **Act**) enables the crediting of greenhouse gas abatement from emissions reduction activities across the economy. Greenhouse gas abatement is achieved either by reducing or avoiding emissions or by removing carbon dioxide from the atmosphere and sequestering carbon in soil, debris or trees.

In 2014, the Act was amended by the *Carbon Farming Initiative Amendment Act 2014*, to establish the Emissions Reduction Fund (the **ERF**). The ERF has three elements: crediting emissions reductions, purchasing emissions reductions, and safeguarding emissions reductions.

Emissions reduction activities are undertaken as offsets projects. The process involved in establishing an offsets project is set out in Part 3 of the Act. An offsets project must be covered by, and undertaken in accordance with, a methodology determination.

Subsection 106(1) of the Act empowers the Minister to make, by legislative instrument, a methodology determination. The purpose of a methodology determination is to establish procedures for estimating abatement (emissions reduction and sequestration) from eligible projects and rules for monitoring, record-keeping and reporting. These methodologies will ensure emissions reductions are genuine—that they are both real and additional to business-as-usual.

In deciding to make a methodology determination, the Minister must have regard to the advice of the Emissions Reduction Assurance Committee (the **ERAC**), an independent expert panel established to advise the Minister on proposals for methodology determinations. The Minister must not make or vary a methodology if the ERAC considers it inconsistent with the offsets integrity standards, which are set out in section 133 of the Act. The Minister must also consider any adverse environmental, economic or social impacts likely to arise as a result of projects to which the determination applies.

Offsets projects that are undertaken in accordance with the methodology determination and approved by the Clean Energy Regulator (the **Regulator**) can generate Australian Carbon Credit Units (**ACCUs**), representing emissions reductions from the project.

Project proponents can receive funding from the ERF by submitting their projects into a competitive auction run by the Regulator. The Government will enter into contracts with successful proponents, which will guarantee the price and payment for the future delivery of emissions reductions.

Further information on the ERF is available at: <http://www.environment.gov.au/emissions-reduction-fund>.

Background: Sequestration and Emissions Avoidance Methodology Determination

The *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Sequestration and Emissions Avoidance) Methodology Determination 2018* (this **Determination**) provides an incentive for proponents to manage fire in savannas to reduce greenhouse gas emissions and sequester carbon from the atmosphere in dead organic matter. These are *savanna sequestration projects*, as defined in section 11 of this Determination. In addition, projects may generate other benefits, including social, cultural, employment and biodiversity benefits.

Building on the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015* (the **2015 Determination**) that accounts for the avoidance of emissions, this Determination accounts for both the avoidance of emissions and sequestered carbon in dead organic matter resulting from the same project activity.

This Determination:

- accounts for the avoidance of emissions in both the high (Russell-Smith et al., 2009, 2003) and low rainfall zones (Murphy et al., 2015);
- accounts for sequestration in the coarse and heavy dead organic matter carbon pools in both the high and low rainfall zones (Cook et al., 2016);
- applies a sequestration buffer that corresponds to the permanence period discount number and risk of reversal buffer number to the sequestration component, but not to the avoided emissions component; and
- includes provisions for existing projects to transfer to the new method to account for additional carbon abatement through sequestration.

Cook GC, Meyer CP, Muepa M and Liedloff AC (2016) Dead organic matter and the dynamics of carbon and greenhouse gas emissions in frequently burnt savannas *International Journal of Wildland Fire* 25(12) 1252-1263

Murphy B, Edwards A, Meyer CP and Russell-Smith J Carbon accounting and savanna fire management CSIRO Publishing. ISBN: 9780643108516

Russell-Smith J, Murphy BP, Meyer MCP, Cook GD, Maier S, Edwards AC, Schatz J, Brocklehurst P (2009) Improving estimates of savanna burning emissions for greenhouse accounting in northern Australia: limitations, challenges, applications. *International Journal of Wildland Fire* 18, 1 - 18.

Russell-Smith J, Yates C, Edwards A, Allan GE, Cook GD, Cooke P, Craig R, Heath B, Smith R (2003) Contemporary fire regimes of northern Australia, 1997-2001: change since Aboriginal occupancy, challenges for sustainable management. *International Journal of Wildland Fire* 12, 283-297.

The Determination has been drafted recognising the importance of on-going development of peer-reviewed science, in collaboration with the scientific community, project proponents and others, to continually improve estimation of abatement. This Determination is constructed in such a way to allow such scientific improvements to be incorporated into abatement estimates (see section 9).

Emissions avoidance

During combustion, fires emit greenhouse gases, including methane and nitrous oxide. Methane has a global warming potential that is 25 times greater than that of carbon dioxide, and nitrous oxide has a global warming potential that is 298 times greater than that of carbon dioxide.

Emissions of greenhouse gases are greater for very hot, high intensity fires when compared with cooler, lower intensity fires. In northern Australian savannas, lower intensity fires predominate in the early dry season, when vegetation still contains some moisture from the wet season. Higher intensity fires predominate in the late dry season, when vegetation is very dry and unplanned fires are not uncommon. During late dry season fires, there is almost complete combustion of fine fuels, with the release of large quantities of greenhouse gases. With no or minimal fire management, fires occur predominantly in the late dry season.

Early dry season fire management was an integral component of traditional Indigenous fire management practices. Early dry season fire management reduces the number and size of late dry season fires. These traditional practices are therefore integral in reducing greenhouse gas emissions for this method as they form the basis of the principal way in which the project activity is implemented.

Sequestration in coarse and heavy fuels

Fire management activities under this Determination result in a greater proportion of fire activity being cooler early dry season fires. If undertaken strategically, these management fires have the potential to reduce the total area burnt each year. As well as reducing the occurrence and extent of late dry season fires, early dry season fire management also results in an increase in the amount of coarse and heavy fuels in the dead organic matter pool. The reduction in mean fire intensity, together with a lower frequency of fires, increases the amount of dead organic matter that is sequestered in the project area over time.

Calculation of net abatement from emissions avoidance and sequestration

To determine the net abatement amount in relation to a calendar year for a savanna fire management project under this Determination, the project proponent separately calculates the contributions from sequestration of carbon in dead organic matter, and from avoided emissions, and then adds the two together.

The emissions avoidance calculations in this Determination estimate the net abatement amount as the difference between mean baseline methane and nitrous oxide emissions and the annual emissions for each project year. The difference between baseline and project emissions reflects the response to the change in fire management practices.

The carbon sequestration calculations in this Determination estimate the net abatement amount as a response to the change in fire management practices as the difference between the mean annual dead organic matter carbon pools during the project and baseline periods.

When calculating the contribution to the net abatement amount from sequestration, the calculations only take into account dead organic matter that consists of coarse fuel and heavy fuel. In contrast, when calculating the contribution to the net abatement amount from avoided

emissions, the calculations account for all fuel size classes (that is, shrub fuel, fine fuel, coarse fuel, and heavy fuel).

Under this Determination, project proponents can either complete calculations manually, or use the appropriate version of the Savanna Burning Abatement Tool (*SavBAT 3*) to calculate net abatement.

Seasonal fire maps for each fire season of each year in the baseline and reporting years are derived from satellite data. Each seasonal fire map is compared with the vegetation fuel type map to derive the area of each vegetation fuel type that was burnt in each fire season of each year.

In addition, 'Years Since Last Burnt' maps are derived by comparing the vegetation fuel type maps with the seasonal fire maps over the preceding years. The 'Year Since Last Burnt' data layers and seasonal fire maps are used to derive fuel loads at the time of burning for fine and shrub fuel size classes. The fuel loads and parameters defining the burning efficiency, patchiness and combustion characteristics of fuels are used to estimate mean emissions of methane and nitrous oxide for the baseline period and emissions of methane and nitrous oxide for each year of the project period.

Under this Determination, the mean annual carbon sequestered in the coarse and heavy fuel loads is determined as the difference between the project equilibrium and baseline equilibrium dead organic matter pools. The project equilibrium is calculated over all years over which the project has been run, and the baseline equilibrium is calculated over the 10-year (high rainfall zone) or 15-year (low rainfall zone) baseline periods. For the sequestration calculations, the fire frequency and area burnt in each season, together with the burning efficiency and patchiness of burnt fire scars are used to calculate the equilibrium dead organic matter in the baseline and project periods. Seasonal fire maps are used to determine the fire frequency and area burnt in the early and late dry seasons under the baseline fire regime and the project fire regime.

Permanence obligations

Carbon stored in vegetation and soils can be released back into the atmosphere by human-induced or natural events, thereby reversing the environmental benefit of the carbon sequestered by the project.

For this reason, all sequestration projects are subject to permanence obligations, which maintain carbon stores for which ACCUs have been issued. The ERF requires proponents of sequestration projects to choose a permanence period of either 25 or 100 years in their application for a declaration of eligible offsets project, under section 22 of the Act (***section 22 application***). Once proponents have nominated a permanence period, proponents are not able to vary that period.

A permanence obligation means that there is an obligation to maintain the sequestered carbon in the project area. The permanence obligation means the carbon stored by a project must be maintained for at least the chosen period, either 25 or 100 years. That means that fire management that increases carbon stored in dead organic matter to a new equilibrium level

consistent with this Determination must be maintained for the full duration of the permanence period to ensure the sequestered carbon is considered permanent. This includes maintaining the project activity after the crediting period has finished, at least up until the permanence period is completed.

If a disturbance, such as a flood, occurs in the project area during the permanence period, causing a decline in the amount of carbon stored, land management practices must enable the carbon stock to return to previously reported levels. Alternatively, ACCUs equivalent to the loss of carbon caused by the disturbance can be returned, or relinquished, to the Regulator.

In contrast, emissions avoidance abatement can be credited for emissions that have been avoided within a sequestration project or within an emissions avoidance project. There is no ongoing obligation to make avoided emissions permanent as avoided emissions are one-off and cannot be reversed.

Transferring project areas

Proponents can transfer one or more project areas that were previously part of a project under a **savanna emissions avoidance determination** or from another project under this determination to a project under this Determination.

There are several ways of moving a transferring project area from its original project to another project that is covered by this Determination depending on whether the *Carbon Credits (Carbon Farming Initiative) Amendment Bill 2017* has or has not passed Parliament and commenced. The provisions in this Determination interact with the [Carbon Credits \(Carbon Farming Initiative\) Rule 2015](#) (the **Rule**) and the Act (both before and after the proposed amendments to the Act commence) to enable proponents to move part or all of their project from either a savanna emissions avoidance project or another savanna sequestration project. An outline summarising how to transfer projects is provided in section 23 of this Determination, including requirements relating to eligible interest holder consents, with detailed provisions in Division 6 of Part 3.

Rainfall zones

This Determination covers two rainfall zones shown on the rainfall zone spatial data layers available on the Department of Environment and Energy's website:

- the high rainfall zone is the area of land indicated as the high rainfall zone on the relevant spatial data layer, as published on the Department's website at the date this Determination commenced; and
- the low rainfall zone is the area of land indicated as the low rainfall zone on the relevant spatial data layer, as published on the Department's website at the date this Determination commenced.

The rainfall zones are not subject to change during the life of the project.

Baseline Period

This Determination uses a baseline period in calculating the net abatement. The meaning of baseline period is explained in section 8 of this Determination.

The use of a baseline period ensures abatement that is credited to a project under this Determination is abatement that is additional to what was achieved during the baseline period. That is, if the project proponent had commenced early dry season fire management before project commencement, they would only generate credits for abatement over and above the abatement that was achieved in the baseline period. As a result, the only abatement credited under this Determination is abatement that is genuinely additional compared to greenhouse gas emissions and sequestration of carbon in dead organic matter during the baseline period.

For land in the high-rainfall zone, a 10-year baseline period will cover approximately three fire cycles. For land in the low-rainfall zone, a 15-year baseline period will cover approximately one to two fire cycles. A fire cycle is the mean time between two fires in a defined area of land. Fire cycles in the high rainfall zone are normally about 3-5 years, and for the low rainfall zone about 7-12 years. These lengths for baselines account for inter-annual variability, and aim to provide a reliable estimate of mean emissions and sequestration in the absence of the project.

Project areas that span both rainfall zones will have two project area parts – one that includes land in the high rainfall zone with a 10-year baseline period, and one that includes land in the low rainfall zone with a 15-year baseline period. In this scenario, both baseline periods will end on the same year.

Example: Baseline period for new project areas

Example 1

Proponents register their new project in 2019 with the Regulator after this Determination commences and they commence early dry season fire management in 2019. Under this scenario, their baseline period will be the 10 (high rainfall) or 15 (low rainfall) years that end in 2018 (the calendar year before project commencement), and ‘new’ abatement will be credited from 2019.

If these proponents had been undertaking early dry season burning prior to 2019 (e.g. for a management objective other than for the reduction of emissions or the sequestration of carbon in dead organic matter), such as under a Government-funded grant, then those years of project activity will be accounted for in the baseline period (which will end in 2018), and ‘new’ abatement (that is over and above the mean during the baseline period) will be credited from 2019. Under this scenario, the mean annual baseline for emissions avoidance projects will be lower than if no early dry season fire management burning had occurred during the baseline

period. In addition, the baseline for sequestered carbon will be higher if fire management occurred during the baseline period.

Example 2

A project has a single project area. The land covered by the project area is in both the high rainfall zone and the low rainfall zone. That is, the project area has two project area parts. One project area part is the part of the project area which is in the high rainfall zone. The second project area part is the part of the project area which is in the low rainfall zone.

This project, even though it has only one project area, does not have a single baseline period. The project has two baseline periods, one of 10 years corresponding to the project area part in the high rainfall zone and one of 15 years corresponding to the project area part in the low rainfall zone.

Fire Management

Fire management may include igniting fires from aircraft, from vehicles along the sides of roads and tracks, from boats on waterways, or by walking across country. The specific location and timing of burning will depend on landscape features within the project area and local weather conditions.

This Determination permits fire management activities that result in a reduction in greenhouse gas emissions and an increase in carbon stocks in dead organic matter. Abatement is enhanced by undertaking early dry season fire management that strategically restricts the spread of late dry season fires. This means that, under the project, there is a shift in the timing of fire activity to more early dry season fires that are cooler and have lower emissions and greater potential for sequestration in dead organic matter.

In addition to active fire management in the early dry season, increased abatement may be achieved through fire suppression and some late dry season fire management activities. For example, it is permitted to use natural or constructed fire breaks to fight fire. Natural or constructed fire breaks can slow or prevent the spread of fire. Natural fire breaks occur where there is no vegetation, such as lakes, rivers, creeks and streams, rock pavements, escarpment (cliffs) and areas scoured by wet season rivers. Constructed fire breaks are roads and tracks that do not contain a vegetation fuel type or any vegetation at all. Constructed fire breaks also include the use of prescribed fire used to fight active fire, such as during back burning operations. The emissions from burning vegetation fuel types in fire breaks which are in the perimeter of the project area are accounted for in this Determination, as these prescribed fires will be evident on seasonal fire maps.

To remain an eligible project the project proponent must prepare annual project management plans. These plans describe the planned burning that is intended to be undertaken in each project area for that year. As part of their reporting requirements, proponents must review their planned burning. This review will describe how successful or otherwise the previous year's fire management was at reducing greenhouse gas emissions and increasing carbon

stocks in dead organic matter. This review can also inform the fire management strategy as outlined in the following year's project management plan.

In addition, the Rule now includes further reporting requirements for sequestration projects. The Rule requires that in the first offsets report to be submitted after the start of both the 8th and 24th year of a sequestration project, the offsets report must set out an explanation of the steps undertaken, and planned to be undertaken, to ensure carbon sequestered from the project activity remains in the project area for the permanence period of the project.

The Determination requires project proponents to undertake planned burning annually in each project area unless the failure to undertake planned burning in a particular year resulted from circumstances beyond the proponent's reasonable control. If planned burning is not undertaken in a project area in a particular year other than as a result of circumstances beyond the proponent's control, the Regulator might seek to revoke the project's declaration under section 27 of the Act, using the process set out in section 32 of the Rule. Circumstances beyond the proponent's reasonable control could include inter-annual variability in climate resulting in a very wet early dry season.

Application of this Determination

This Determination sets out a method for estimating abatement from eligible savanna sequestration and emissions avoidance projects. The project activity will result in an increase in the amount of carbon sequestered in dead organic matter and a net reduction of greenhouse gas emissions from savanna fires.

Proponents are encouraged to read this Determination in combination with the applicable savanna technical guidance document, the *Carbon Credits (Carbon Farming Initiative) Act 2011* (the *Act*), the [Carbon Credits \(Carbon Farming Initiative\) Rule 2015](#) and the [Carbon Credits \(Carbon Farming Initiative\) Regulations 2011](#) (the *Regulations*).

This Determination reflects the requirements of the Act's offsets integrity standards, which aim to ensure carbon abatement is real and additional to business as usual. The offsets integrity standards require that an eligible project results in carbon abatement that is unlikely to occur in the ordinary course of events and is eligible carbon abatement under the Act. In summary, the offsets integrity standards also require that:

- amounts resulting from undertaking the project activity are measurable and capable of being verified;
- the methods used are supported by clear and convincing evidence;
- material emissions, which are a direct consequence of the project, are deducted; and
- estimates, assumptions or projections used in a methodology determination are conservative.

Project proponents wishing to implement projects under this Determination must make an application to the Regulator under section 22 of the Act. They must also meet the general eligibility requirements for an offsets project set out in subsection 27(4) of the Act, which

include compliance with the requirements set out in this Determination, and the additionality requirements in subsection 27(4A) of the Act. The additionality requirements are:

- the *newness* requirement;
- the *regulatory additionality* requirement; and
- the *government program* requirement.

Subsection 27(4A) of the Act provides that a methodology determination may specify requirements in lieu of the newness requirement or the regulatory additionality requirement. This Determination:

- specifies a requirement in lieu of the newness requirement. This requirement applies to project applications including new projects that have transferring project areas and is explained in the detailed outline of Division 6 of Part 3 of the Determination (see [Attachment A](#) to this Explanatory Statement); and
- specifies a requirement in lieu of the regulatory additionality requirement. This requirement applies to project applications including new projects that have transferring project areas, and is explained in the detailed outline of section 22 of the Determination (see [Attachment A](#) to this Explanatory Statement).

Public consultation

This Determination has been developed by the Department of the Environment and Energy in collaboration with the Regulator and advice from expert scientists and savanna land managers.

The original consultation draft of this Determination was published on the Department's website for public consultation from Monday 21 November to Monday 19 December 2016.

Two stakeholder workshops were included, one as part of the formal stakeholder consultation period in November 2016, and another in March 2017. Submissions from the 2016 public consultation, and consultation during the workshops in November 2016 and in March 2017 led to revisions to the Determination and a second consultation period.

An updated Determination was published on the Department's website for public consultation from Monday 13 November to Monday 27 November 2017. Details for how to make a submission were provided on the Department's website, www.environment.gov.au, at that time. Feedback from submissions from all these processes has been incorporated into the Determination as made.

Determination details

Details of this Determination are at [Attachment A](#). Numbered sections in this Explanatory Statement align with the relevant sections of this Determination.

This Determination, once made, will be a legislative instrument for the purposes of the *Legislation Act 2003*. This Determination would commence on the day after it is registered on the Federal Register of Legislation.

For the purpose of subsections 106(4), (4A) and (4B) of the Act, in making this Determination the Minister has had regard to, and agrees with, the advice of the Emissions Reduction Assurance Committee that the Determination complies with the offsets integrity standards and that the proposed Determination should be made. The Minister is satisfied that the carbon abatement used in ascertaining the carbon dioxide equivalent net abatement amount for a project is eligible carbon abatement from the project. The Minister also had regard to whether any adverse environmental, economic or social impacts are likely to arise from the carrying out of the kind of project to which the Determination applies and other relevant considerations.

A Statement of Compatibility with Human Rights prepared in accordance with the *Human Rights (Parliamentary Scrutiny) Act 2011* is at Attachment B to this draft explanatory statement.

Details of this Methodology Determination

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Part 1 Preliminary

1 Name

Section 1 sets out the full name of this Determination, which is the *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Sequestration and Emissions Avoidance) Methodology Determination 2018*.

2 Commencement

Section 2 provides that this Determination would commence on the day after it is registered on the Federal Register of Legislation.

3 Authority

Section 3 provides that this Determination would be made under subsection 106(1) of the Act.

4 Duration

Under subparagraph 122(1)(b)(i) of the Act, a methodology determination remains in force for the period specified in the Determination.

This section provides that this Determination would remain in force from commencement until the day before it would otherwise be repealed under subsection 50(1) of the *Legislation Act 2003*.

Instruments are repealed under that provision on either 1 April or 1 October following the tenth anniversary of registration on the Federal Register of Legislation. Paragraph 4(b) ensures that this Determination, once made, would expire in accordance with subparagraph 122(1)(b)(i) of the Act.

If this Determination expires or is revoked during a crediting period for a project to which it applies, then it would continue to apply to the project during the remainder of the crediting period in accordance with subsections 125(2) and 127(2) of the Act.

Under section 27A of the Act, the ERAC may also suspend the processing of applications under a determination if there is reasonable evidence that this Determination does not comply with one or more of the offsets integrity standards. This does not impact applications for declaration already received by the Regulator before such a suspension, or declared eligible offsets projects, which would apply this Determination.

5 Definitions

Section 5 defines a number of terms used in this Determination. A number of terms not defined in section 5 (but used in this Determination) are defined in the Act.

Under paragraph 13(1)(b) of the *Legislation Act 2003* and section 23 of the *Acts Interpretation Act 1901*, unless the contrary intention appears, words in this Determination in the singular number include the plural and words in the plural number include the singular.

Definitions of the relevant fuel size classes are given further explanation below, along with accessibility information about some documents incorporated by reference in this Determination.

Fuel size class includes shrub fuel, fine fuel, coarse fuel, and heavy fuel. Emissions avoidance calculations take into account all fuel size classes. Sequestration calculations take into account only coarse fuel and heavy fuel size classes.

- Shrub fuel - vegetation fuel that has a diameter of less than 6 millimetres, and is a component of a plant that has a stem diameter of less than 50 millimetres at a height of 1.3 metres.
- Fine fuel - vegetation fuel that consists of all grasses (whether living or dead), leaf litter, bark litter, and twigs that are dead, and have a diameter of less than 6 millimetres. This fuel type must be on the ground and not attached to a plant or tree (other than for grasses).
- Coarse fuel - vegetation fuel that consists of twigs or branches that are dead and on the ground, and have a diameter of between 6 millimetres and 50 millimetres (inclusive).
- Heavy fuel - vegetation fuel that consists of branches or logs that are dead and on the ground, and have a diameter of greater than 50 millimetres.

The term **savanna emissions avoidance determination** is used in this Determination to refer to all savanna emissions avoidance determinations. The definition lists all the savanna emissions avoidance determinations, and includes the *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Emissions Avoidance) Methodology Determination 2018*.

The **relevant calculation period** in relation to the calendar year, is used to calculate the baseline equilibrium carbon stock and to calculate the project equilibrium carbon stock in dead organic matter. It is also used to calculate the 10-year project equilibrium fuel load consistent with subparagraph 36(3)(d)(ii) of this Determination.

Paragraph (a) specifies that the relevant calculation period when calculating a value that relates to the baseline period, such as the baseline equilibrium carbon stock, $\bar{C}_{Seq,B,E,f,v}$ is the baseline period.

Paragraph (b) specifies that the relevant calculation period when calculating a value that relates to a later calendar year (other than an amount covered by paragraph (c)), such as the project equilibrium carbon stock, $\bar{C}_{Seq,P,E,f,v}$ is the total period that the project has been running for.

For all project areas, other than those transferred from the *Carbon Credits (Carbon Farming Initiative) (Reduction of Greenhouse Gas Emissions through Early Dry Season Savanna Burning—1.1) Methodology Determination 2013* the ‘relevant calculation period’, for the purposes of paragraph (b), is the period that:

- begins on the 1 January after the baseline period ends; and

- ends at the end of the calendar year in relation to which the adjusted contribution to the net abatement amount from sequestration is being calculated.

The exception to this rule, is for project areas that transferred from the *Carbon Credits (Carbon Farming Initiative) (Reduction of Greenhouse Gas Emissions through Early Dry Season Savanna Burning—1.1) Methodology Determination 2013*. For these project areas, the relevant calculation period begins in the year of the relevant ‘project commencement’ date within the meaning of that determination), and ends in the calendar year being reported on. As a result of subsection 4.20(1) of that determination, the end of the baseline period and the start of the project period are not required to be in consecutive years. This means that there could be a gap of several years (up to 6 years) between the end of the baseline period and the project commencement date.

Paragraph (c) specifies the start and end of the ‘relevant calculation period’ for calculating the 10-year project equilibrium fuel load for a particular calendar year, in accordance with subparagraph 36(3)(d)(ii) of this Determination. The period begins on whichever date is later out of the beginning of the period referred to in paragraph (b), and the beginning of the ninth year before the calendar year for which the calculation is being made. The period ends at the end of the calendar year for which the calculation is being made. The ‘relevant calculation period’ in this case is a 10 year period.

The 10-year project equilibrium is calculated over all project years for the first ten project years. For example, for project year 3, the equilibrium is calculated over project years 1, 2 and 3. For project years 11 onwards, the 10-year project equilibrium is calculated over the calendar year and the previous 9 calendar years.

Example: Length of 10-year project equilibrium fuel load period

A project’s baseline period ends on the 31 December 2017. The project’s relevant calculation period commences on 1 January 2018.

In 2019, for the purposes of calculating the *10-year project equilibrium fuel load*, the ‘relevant calculation period’ begins on 1 January 2018 and ends on 31 December 2018. That is, the period is 1 calendar year long – the 2018 calendar year.

In 2026, for the purposes of calculating the *10-year project equilibrium fuel load*, the period begins on 1 January 2018 and ends on 31 December 2025. That is, the period is 8 calendar years long.

In 2032, for the purposes of calculating the *10-year project equilibrium fuel load*, the period begins on 1 January 2022 and ends on 31 December 2031. That is, the period is 10 calendar years long.

The *savanna technical guidance document* accompanies this Determination and the *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Emissions Avoidance) Methodology Determination 2018*. This document must be used by proponents when estimating abatement. This document includes:

- descriptions of the vegetation fuel types that are eligible for each rainfall zone;
- values of variables that are used to calculate the net abatement amount and that are either contained in, or calculated in accordance with, the National Inventory Report;
- values of the fuel accumulation values for fine and shrub fuel size classes that are used for the purposes of subsection 7(2) of Schedule 1, and which differ from the values set out in the National Inventory Report;
- instructions relating to mapping requirements, including how to create and validate vegetation fuel type maps, fire maps and ‘Years Since Last Burnt’ maps, and the required accuracy of these maps;
- guidance for developing project management plans; and
- descriptions of relevant weed species, and details of weed monitoring requirements.

Project proponents must ensure they always use the latest version of the guidance document, as in force at the end of the reporting period, in accordance with section 10 of the Determination, subsection 106(8) of the Act and subsection 14(2) of the *Legislation Act 2003*. The *savanna technical guidance document* can be accessed at <http://environment.gov.au>. (See also section 9 of this Determination).

SavBAT 3 is the Savanna Burning Abatement Tool version 3 which is available at <https://savbat.net.au>, and can be used to estimate abatement, as it calculates the net abatement amount in accordance with this Determination. Alternatively, proponents may elect to manually estimate the net abatement amount in accordance with Schedules 1 and 2 of the Determination. (See also section 9 of this Determination).

6 Meaning of high rainfall zone and low rainfall zone

The meaning of the **high rainfall zone** is land indicated as being within the high rainfall zone on the *Savanna Fire Management High Rainfall Zone spatial data layer*. Subsection 6(2) defines that the version of the Savanna Fire Management High Rainfall Zone spatial data layer to be used is the one that was published on the Department’s website at the date this Determination commenced. It is available at <http://environment.gov.au>.

The meaning of the **low rainfall zone** is land indicated as being within the low rainfall zone on the *Savanna Fire Management Low Rainfall Zone spatial data layer*. Subsection 6(2) defines that the version of the Savanna Fire Management Low Rainfall Zone spatial data layer to be used is the one that was published on the Department’s website at the date this Determination commenced. It is available at <http://environment.gov.au>.

These maps determine whether the land covered by the project is in an eligible area under this Determination.

7 Meaning of fire season, early dry season and late dry season

Subsection 7(1) provides that the *fire seasons* for this Determination are the early dry season and the late dry season.

A note to subsection 7(1) provides that the definitions of the early and late dry seasons overlap with the wet season. The wet season occurs in northern Australia from approximately November to April, when fire occurrence is extremely low.

Subsection 7(2) provides that the early dry season is the period of a calendar year that is not defined as being in the late dry season. Subsection 7(2) also sets out that the late dry season is the period of a calendar year that is defined as starting on the date indicated by the Savanna Fire Management LDS Start Date spatial data layer (paragraph (a) of the definition of ‘late dry season’) and ending on the date defined by the Savanna Fire Management LDS End Date spatial data layer (paragraph (b) of the definition of ‘late dry season’). The spatial data layers could specify a single date for all areas on which the late dry season begins or ends or multiple dates for different areas of land.

At the time this Determination was endorsed, these maps (spatial data layers) indicated that the start date for the late dry season is 1 August, and the end date is 31 December for all areas in the high rainfall zone and in the low rainfall zone. It is possible that in the future there may be different start and end dates for the late dry season for different areas of land. Further, it is possible that, in the future, the late dry season for a particular area of land and for a particular year might end in the following year (that is, that the late dry season might begin in the second half of one calendar year and end in the first half of the following calendar year).

Subsection 7(3) defines the applicable version of the Savanna Fire Management LDS Start Date spatial data layer and the Savanna Fire Management LDS End Date spatial data layer. The applicable version is the version published at the time the Determination commenced unless a later version of the relevant spatial data layer is published before the 1 July of the year prior to the calendar year being reported on. It is incorporated consistent with paragraph 106(8)(b) of the Act and subsection 14(2) of the *Legislation Act 2003*. At the time this Determination was made, these spatial data layers were available at <http://environment.gov.au>.

For each area of land, the early dry season will always end on the day before the start date for the late dry season, as indicated in the Savanna Fire Management LDS Start Date spatial data layer. For each area of land the early dry season will start on the day after the end date for the late dry season, as indicated in the Savanna Fire Management LDS End Date spatial data layer.

Any changes in the timing of the start and end of the late dry season will be automatically accounted for in SavBAT 3 for the relevant calendar years. For manual calculations, updates to the start and end dates for the late dry season for each area of land will need to be incorporated.

Example: Fire season start date

At the beginning of the calendar year 2019, a Savanna Fire Management LDS Start Date spatial data layer on the Department's website indicated that the late dry season started on 1 August. On 11 July 2025, the Department's website was updated to provide a Savanna Fire Management LDS Start Date spatial data layer and a Savanna Fire Management LDS End Date spatial data layer that defined different regional dates for the start and end of the late dry season in the project area. These updated spatial data layers are effective as of 1 January 2027, as the updated spatial data layers were not published prior to 1 July 2025. (If they had been published before 1 July 2025, then they would apply from 1 January 2026.)

The project proponent elects to submit an offsets report in 2029, reporting on years 2026, 2027 and 2028. For baseline and project calculations for the reporting year 2026, the project proponent must use 1 August as the start of the late dry season and 31 December for the end of the late dry season. For baseline and project calculations for the reporting years 2027 and 2028, the project proponent must use the late dry season start dates defined by the Savanna Fire Management LDS Start Date spatial data layer and the late dry season end dates defined by the Savanna Fire Management LDS End Date spatial data layer to determine the start and end of the late dry season in each area of land. This step will be completed automatically in SavBAT 3.

8 Meaning of baseline period

Baseline period – general rule

Subsection 8(1) provides the general rule for baseline period. This provision is subject to section 26, which provides alternate provisions for the baseline period for areas of land that are within transferring project areas.

Paragraphs 8(1)(a) and (b) provide that the baseline period is 10 years if the area is wholly in the high rainfall zone, or 15 years if the area is wholly in the low rainfall zone.

Paragraph 8(1)(c) provides that the baseline period from paragraph 8(1)(a) or (b) ends immediately before the year in which the crediting period begins for an area of land that is part of a project area that had been identified in the section 27 declaration when the project was declared as an eligible offsets project. This effectively means, that for this situation, the baseline period ends the year immediately before the crediting period begins.

Paragraph 8(1)(d) provides that the baseline period from paragraph 8(1)(a) or (b) ends in the year in which the relevant variation of the section 27 declaration took effect, for an area of land that is first identified as a project area in a subsequent variation of the section 27 declaration. This is relevant for areas of land, such as a new project area, that were added to the project at a date later than the date when the project was declared an eligible offsets project. This effectively means, that for these areas of land, the baseline period ends in the calendar year before the relevant variation took effect.

There are two notes to subsection 8(1). The first note specifies that if a project area has a single project area part (for example, if it lies entirely within one rainfall zone), then it will have a single baseline period. Conversely, if a project area has two project area parts (for

example, because the project area spans both rainfall zones), then it will not have a single baseline period. In this situation, each project area part will have its own baseline period. If the project proponent calculates the net abatement amount manually, section 10 of Schedule 1 and section 8 of Schedule 2 set out how the calculations that deal with project areas that span both rainfall zones, and that therefore do not have a single baseline period. If the project proponent calculates the net abatement amount using SavBAT 3, this is dealt with by SavBAT 3.

The second note clarifies the situation for transferring project areas. The former determination generally fixed the baseline period for a project area, and section 26 of the Determination preserves the baseline period that applied under the former determination for a transferring project area.

Examples: Meaning of baseline period

Example 1

In 2019, a project proponent has a savanna fire management project declared eligible under this Determination, with the project's crediting period beginning in 2019. The baseline period for all areas of land in the project areas of the new project end in 2018.

Example 2

A project area includes land in both rainfall zones. The project area does not have a single baseline period. Instead, the part of the project area that is in the high rainfall zone has a 10-year baseline period, and the part that is in the low rainfall zone has a 15-year baseline period. The end date for both baseline periods will be the same (as calculated in accordance with paragraphs 8(1)(c) and (d) of the Determination).

Example 3

A project nominated a start date and commenced a savanna sequestration project under this Determination in 2019. The baseline period ends in 2018. A new project area was added to the project and the section 27 declaration was varied, with the variation taking effect in 2020. The baseline period for this new project area ends in 2019.

Subsection 8(2) provides that, if a project area is subdivided after the project commenced, then the baseline period in each subdivided project area is the same as the baseline period in the original project area. This has the practical effect of, once an area of land in a project has been assigned a baseline period, ensuring that the area of land has the same baseline period, even if it is later subdivided.

A note to subsection 8(2) states that definitions of 'subdivided project area' and 'original project area' are available in subsection 15(2).

9 Documents that are updated from time to time

This method recognises that abatement estimates within the method are underpinned by science that is undergoing continuing development and improvement. This section defines a list of subsidiary documents that may be updated from time-to-time, and the processes for updating this material. Updates to material might include updates which reflect and incorporate improved science to inform more robust abatement calculations.

Subsection 9(1) provides a list of all subsidiary documents provided on the Department's website and that are referred to in the Determination and may be updated from time to time. These documents include:

- the ***Relevant Weeds Risk spatial data layer*** if it exists. The spatial data layer will not exist when the Determination commences. It might be created in future years. This spatial data layer is used to comply with the provisions for monitoring relevant weed species as provided in section 40. The *Relevant Weeds Risk spatial data layer* spatial data layer is incorporated in accordance with paragraph 106(8)(b) of the Act and subsection 14(2) of the *Legislation Act 2003*, and will be available from <http://environment.gov.au>;
- the ***Savanna Fire Management LDS Start Date spatial data layer*** and the ***Savanna Fire Management LDS End Date spatial data layer***. These spatial data layers are used for working out when the late dry season begins and ends for each eligible area of land in the project area for the purposes of section 7 of the Determination;
- the ***savanna technical guidance document*** which accompanies this Determination and the *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Emissions Avoidance) Methodology Determination 2018*. This document must be used by proponents as required in the Determination. This document includes:
 - descriptions of the vegetation fuel types that are eligible for each rainfall zone;
 - values of variables that are used to calculate the net abatement amount and that are either reproduced from, or calculated in accordance with, the National Inventory Report;
 - values of the fuel accumulation values that are used for the purposes of subsection 8(3) of Schedule 1;
 - instructions relating to mapping requirements, such as how to create and validate vegetation fuel type maps, fire maps and 'Years Since Last Burnt' maps, and the required accuracy of these maps;
 - guidance for developing project management plans; and
 - descriptions of relevant weed species, and details of weed monitoring requirements.

Project proponents must ensure they use the version of the savanna technical guidance document, as in force at the end of the reporting period, in accordance with subsection 10(1)

of the Determination. The *savanna technical guidance document* can be accessed at <http://environment.gov.au>.

Subsection 9(2) confirms that for the purposes of this Determination, **SavBAT 3** refers to the savanna burning abatement tool version 3 that is published on the SavBAT website that in 2018 was found at <https://savbat.net.au>. SavBAT 3 automates all the calculations required for estimating abatement for emissions avoidance and sequestration for a calendar year. Project proponents can choose to calculate their abatement estimates either using SavBAT 3 or manually according to Schedules 1 and 2 of this Determination.

Subsection 9(3) confirms that any reference to the **National Inventory Report** in this Determination is to the most recent version of the National Inventory Report available on the Department's website. Each year the Department prepares the National Inventory Report to fulfil obligations that Australia has agreed to under the United Nations Framework Convention on Climate Change to report on the nation's greenhouse gas emissions across all sectors.

All of these definitions reference documents that may be updated from time to time. Section 14 of the *Legislation Act 2003* provides that a legislative instrument (such as a methodology determination) is able to make provisions in relation to a matter by applying, adopting or incorporating, with or without modification, any matter contained in an instrument or writing as in force from time to time or at a particular time, but only if the enabling legislation permits material to be incorporated in this manner. Subsection 106(8) of the Act permits matters to be incorporated in this manner; this subsection provides that a methodology determination may make provision in relation to a matter by applying, adopting or incorporating, with or without modification, a matter contained in an instrument or writing as in force or existing from time to time or at a particular time.

It is necessary to refer to these documents that may be updated from time to time for the following reasons:

- Descriptions of the vegetation fuel types can be updated as new science quantifying emissions and sequestration parameters allows additional vegetation fuel types to be considered eligible under this Determination.
- Referring to values in the latest National Inventory Report will allow the credits generated under the method to incorporate improvements in the robustness of the science underpinning emissions estimates, and ensure abatement estimates remain consistent with those reported internationally as part of Australia's greenhouse gas accounting obligations.
- Parameterisation of the modelled approach to estimate seasonal fine fuel accumulation can be improved with future additional science and analysis. This would reduce the uncertainty in emissions abatement estimates.
- Updates to instructions for creating and validating maps will allow future technologies which reduce regulatory burden and improve accuracy to be incorporated into the method.

- Updates to guidance for developing project management plans would allow the inclusion of future technologies and practices to be implemented in the method.
- Future scientific analysis relating to fire behaviour in high biomass weeds and monitoring approaches for these weeds can be incorporated into the method guidance document. Future approaches to monitoring that incorporate new technologies could reduce regulatory burden and improve accuracy.
- Uncertainties regarding abatement estimates can be reduced when future analysis is incorporated into the Relevant Weeds Risk spatial data layer, the Savanna Fire Management LDS Start Date spatial data layer and the Savanna Fire Management LDS End Date spatial data layer.
- Updates to SavBAT 3 will align with updates to input parameters used to calculate abatement.

Paragraph 9(4)(a) provides that all the documents covered by subsection 9(1) and subsection 9(2) must be published with an accompanying outline that describes the process that will be undertaken before any modifications or updates to the document will be made. The publication of the process that will be followed prior to any modifications to the document being made will allow proponents to understand the circumstances under which modifications are likely to be made, the factors that would be considered prior to any modification being made, and how the process would consider a number of factors prior to any modification being made.

Paragraph 9(4)(b) provides that any modifications to the documents outlined in subsection 9(1) and subsection 9(2) must be accompanied by the reason why the document has been modified and an outline of the process that was undertaken to determine that the modification to the document was appropriate. This will also include any advice provided by the Emissions Reduction Assurance Committee in regard to the modification to the document prior to the time that the modification was made.

Modifications to documents described in subsection 9(1) and subsection 9(2) may be required as they are correcting identified errors or are consistent with requirements to comply with Australia's international obligations for reporting on greenhouse gas emissions. The Act (subsection 133(c)) requires that all Emissions Reduction Fund methodologies can only credit eligible carbon abatement. Eligible carbon abatement means carbon abatement that is able to be used to meet Australia's international climate change targets. This means that if values in the National Inventory Report are required to be updated to remain consistent with international reporting requirements, then these updates must be reflected in all Emissions Reduction Fund methodologies that make reference to these values. Under these circumstances the outline for paragraph (4)(a) could indicate that public notice will be given before the document is republished.

For other modifications, the outline could indicate that, before the changes come into force:

- public consultation will be undertaken in relation to the proposed modifications; and
- when deciding whether to modify the document, regard will be had to matters such as the following:
 - all submissions received as a result of the public consultation;
 - the scientific rationale underlying the proposed modifications;
 - the impacts (if any) on project proponents (such as changes to regulatory burden) resulting from the proposed modifications;
 - the impact (if any) of the proposed modifications on the calculation of the net abatement amount;
 - whether it would be appropriate for the proposed modifications to be peer reviewed.

10 References to factors and parameters from external sources

Subsection 10(1) provides that factors and parameters referred to in SavBAT 3 or in this Determination that are required to be sourced from external documents, must be taken from the version of the relevant external document that is in force on the last day of the relevant reporting period for the project. At the time of publication this included the version of the savanna technical guidance document, National Inventory Report, *National Greenhouse and Energy Reporting Regulations 2008* and relevant weeds risk spatial data layer (if it exists on the Department's website) that is in force at that time. Note that the reference to the *National Greenhouse and Energy Reporting Regulations 2008* in section 7 of Schedule 1 is to those regulations as in force from time to time. These are available from the Federal Register of Legislation.

Subsection 10(2) states that subsection 10(1) does not apply if this Determination stipulates otherwise, or if it is not possible to define or calculate these parameters by reference to the relevant external documents. See subsection 34(3) of the Determination for a stipulation otherwise, in relation to the Savanna Fire Management LDS Start Date spatial data layer and the Savanna Fire Management LDS End Date spatial data layer.

Part 2 Savanna sequestration projects

11 Savanna sequestration projects

Paragraph 27(4)(b) of the Act provides that the Regulator must not declare that an offsets project is an eligible offsets project unless satisfied that it is covered by a methodology determination. Paragraph 106(1)(a) of the Act provides for methodology determinations to specify the kind of offsets projects to which they apply.

Subsection 11(1) provides that the Determination applies to an offsets project that satisfies each of paragraphs 11(1)(a), (b), (c) and (d). An offsets project that satisfies each of these is a ***savanna sequestration project***.

Paragraph 11(1)(a) provides that, for this Determination to apply, the offsets project must involve managing the burning of savannas so as to satisfy two objectives set out in subparagraphs 11(1)(a)(i) and (ii).

The savanna fire management must have the first objective set out in subparagraph (i) – to remove carbon dioxide from the atmosphere by sequestering more carbon in dead organic matter than was sequestered during the baseline period. Section 54 of the Act defines sequestration offsets projects as projects where carbon is sequestered in living and dead biomass and in soils.

The savanna fire management must also have the second objective set out in subparagraph (ii) - to avoid emissions of methane and nitrous oxide from the burning of savannas compared to the emissions avoided during the baseline period. The change in fire management to a greater proportion of cooler fires and fewer hotter fires results in the avoidance of emissions of methane and nitrous oxide.

Paragraph 11(1)(b) specifies that projects must not increase greenhouse gas emissions from other sources, such as livestock or alter the rate of the decomposition of organic carbon. For example, projects cannot increase stocking rates above those that would otherwise occur in the absence of the project, in an attempt to reduce fuel loads and hence modify fire activity. Further, projects cannot undertake activities that would increase the rate of decomposition of organic carbon. For example, projects cannot undertake activities that increase water content, or increase the activity of termites or other organisms involved in decomposition.

Paragraph 11(1)(c) provides that this Determination covers offsets projects that are carried out in a savanna which includes land in either or both the high or low rainfall zones, as defined by the relevant rainfall zone spatial data layers and provided for in section 6 of this Determination.

Paragraph 11(1)(d) provides that projects must be reasonably expected to result in eligible carbon abatement. This means that the objectives in this paragraph are met through a change in fire management activity, and this is likely to result in net positive abatement which is able to be used to contribute to Australia's international climate change targets.

The expression 'can reasonably be expected to' is used in other areas of law, and it is intended that this expression would take on its usual meaning in this provision. In particular, it has been held that the words used in this expression are typically intended to receive their ordinary meaning. That is to say, they require a judgment to be made by the decision-maker as to whether it is reasonable, as distinct from something that is irrational, absurd or ridiculous, to expect that the stated outcome would eventuate. Courts have held that it is undesirable to attempt any paraphrase of these words. In particular, that it is undesirable to consider the operation of provisions expressed in these words in terms of probabilities or possibilities or the like. Rather, courts have held that it is preferable to confine the inquiry to whether the expectation claimed was reasonably based.

Subsection 11(2) provides that a project covered by subsection 11(1) is a *savanna sequestration project* under this Determination.

Subsections 11(3) and (4) deal with an issue that would arise if a project proponent who was running a savanna emissions avoidance offsets project were to seek to apply this Determination to their project under sections 128 to 130 of the Act, prior to the Carbon Credits (Carbon Farming Initiative) Amendment Bill 2017 passing Parliament and having commenced as the *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* (the amending Act).

Projects covered by this Determination are sequestration offsets projects. Central to the nature of sequestration offsets projects under the Act are permanence obligations which ensure that sequestration of carbon persists for the duration of the project's permanence period. However, prior to the commencement of the amending Act, if a proponent were to seek to rely on sections 128 to 130 of the Act to move their project onto this Determination, there would be no express mechanism under the Act to establish a permanence period for the project. The amending Act would provide an express mechanism to give such a project a permanence period.

To prevent proponents from seeking to rely on sections 128 to 130 of the Act prior to commencement of the amending Act, subsection 11(3) provides that this Determination does not cover projects already being carried out under a savanna emissions avoidance determination, as defined in section 5 of this Determination. This provision is intended to have the following effect. Before the Regulator is able to apply another methodology determination to an existing eligible offsets project under section 130 of the Act, the Regulator must be satisfied that the project is covered by the methodology determination (see subsection 130(3) of the Act). For a project that is covered by a savanna emissions avoidance determination (as defined in section 5 of this Determination), the intention is that subsection 11(3) would prevent the Regulator from approving the application of this Determination to the existing project, on the basis that the Regulator would not be able to be satisfied that the project was covered by this Determination.

If the amending Act has not commenced, then projects transferring from a savanna emissions avoidance project will need to apply to the Regulator to have their previous project declaration revoked in accordance with the legislative rules made for the purposes of section 32 or 33 of the Act, or to have the section 27 declaration of the existing savanna emissions avoidance project varied so as to remove the transferring project areas, and apply to the Regulator for a new declaration under section 22 of the Act. The application for the section 27 declaration must list this Determination as the applicable methodology determination, specify a permanence period, and include all eligible interest holder consents. This will ensure that the permanence period commences when credits are first issued under the savanna sequestration project. This application would need to be made in accordance with section 30A or section 30B of the *Carbon Credit (Carbon Farming Initiative) Rule 2015* (the **Rule**).

Further, section 27 declarations cannot be varied to transfer a project area under a savanna emissions avoidance determination to a project under this Determination. This ensures that proponents comply with the permanence obligations associated with sequestration offsets projects under the ERF.

Subsection 11(4) provides that, if the amending Act commences, then subsection (3) ceases to apply, on and from the date that the amending Act commences. Once the amending Act has commenced, project proponents undertaking a savanna emissions avoidance project will be able to transfer to the savanna sequestration method by applying under section 128 of the Act. The project proponent would specify a permanence period in their request to transfer, under section 128 of the Act, with the permanence period commencing when the project first received credits on an earlier savanna determination.

Part 3 Project Requirements

Division 1 General

12 Operation of this part

The effect of paragraph 106(1)(b) of the Act is that a methodology determination must set out requirements that must be met for a project to be an eligible offsets project. Under paragraph 27(4)(c) of the Act, the Regulator must not declare that a project is an eligible offsets project unless the Regulator is satisfied that the project meets these requirements. Section 12 provides that Part 3 of this Determination sets out requirements for the purpose of paragraph 106(1)(b) of the Act.

13 Information to include in section 22 application

Section 13 sets out the requirements for information to be included in a section 22 application if one or more project areas are transferring project areas. It requires an applicant to expressly state that they have a transferring project area or areas. It also requires information about the identity of the transferring project areas, and the unique project identifiers for the former project.

Division 2 Project area

A note in this Determination provides that a project may have more than one project area and that, for reporting purposes, the proponent may divide the project into individual project areas in accordance with section 77A of the Act. The note also explains the different options available and requirements for reporting schedules for the project.

This Determination describes the calculations of the net abatement amount in terms of each project area, so a project with more than one project area will have to undertake calculations separately for each area for each calendar year. See subsection 34(2). Regardless of the reporting schedule, abatement calculations must be completed and reported on for each calendar year in each project area.

14 Requirements relating to project area

Subsection 14(1) provides that all areas of land included in the project must be in either the high rainfall zone or the low rainfall zone or in both rainfall zones. Projects cannot be undertaken on an area of land that is not in either of the rainfall zones.

Subsection 14(2) specifies that each project area or project area part must meet a number of provisions. For a project area that spans both rainfall zones, the part of the project area that is in each rainfall zone is a 'project area part'. Paragraph 14(2)(a) specifies that at least one vegetation fuel type must be present in each project area or project area part. *Vegetation fuel type* is defined in this Determination as a type of vegetation in the high rainfall zone or the low rainfall zone that is characterised in terms of the structural formation of its dominant stratum and its grass type as described in the savanna technical guidance document.

Paragraph 14(2)(b) clarifies that project areas and project area parts cannot contain any areas that contain relevant weed species (subparagraph (b)(i)), and areas where the relevant vegetation fuel type has been removed after the start of the project, for example, through clearing (subparagraph (b)(ii)). Any areas of land that contravene these subparagraphs must be removed from the project in order for the project to remain an eligible offsets project or have the weeds permanently removed – see subsections 14(3) and (4). If areas have been removed for these reasons, and the vegetation fuel type later returns to the area, this area cannot be added back into the project (subparagraph 14(2)(b)(iii)). The intention is that weed infested areas of land cannot either remain in a project area, or become part of that project area again in the future. This is because areas of land infested with weeds are not parameterised for the purposes of calculating abatement. Weed infested areas of land will generally burn with a higher intensity than native vegetation. Higher intensity fires produce more emissions, can alter the vegetation fuel type and release carbon sequestered in dead organic matter back to the atmosphere.

A note beneath subsection (2) clarifies that the eligibility requirement of subsection (2) applies whether or not the savanna technical guidance document describes a monitoring approach for relevant weed species that requires proponents to monitor for relevant weed species in accordance with section 40. Identification of the presence of relevant weeds can be from any source (e.g. visual, remote-sensing, specified monitoring, reporting). The absence of weeds identified through the approach to monitoring of section 40 does not necessarily confirm their absence, as smaller infestations may be difficult to identify.

False or misleading information regarding the identification of weeds in the project area may lead to the revocation of a project and the relinquishment of Australian carbon credit units, in accordance with sections 38 and 88 of the Act.

Subsection 14(3) provides that if land fits the description of subparagraph 14(2)(b)(i), (ii) or (iii), or if a transferring project area means paragraph 25(4)(a) applies, the proponent may remove the area of land from the project area consistent with section 15. That is, the area needs to be removed from the project in two steps: first, the project area must be subdivided, with the area to be removed being one of the subdivided project areas; then it can be removed as a whole project area. Paragraph 14(3)(b) allows the area to qualify as a project area for the

purposes of the subdivision. If a project area is removed from the project as a result of subparagraphs 14(2)(i) or (ii), there are additional reporting requirements specified under subsection 36(5).

Subsection 14(4) provides another mechanism to address areas containing relevant weed species in a project area, and fitting the description of subparagraph 14(2)(b)(i). In some situations, for example if a small number of weed plants are identified, it may be possible to physically remove weeds from the project area. It may not be possible to permanently remove significant infestations of weeds, in which situation subsection 14(3) would apply. Small areas of weeds are unlikely to have a material impact on abatement estimates in the short term, but relevant weed species are required to be permanently removed as soon as practical for the project to remain an eligible offset project. If the weeds are permanently removed from the area, and this is demonstrated through monitoring (section 40 and reporting requirements in paragraph 36(1)(i)) and before the end of the reporting period, then there is no need to subdivide the project area as provided for in subsection 14(3).

Subsection 14(5) applies further conditions to subsections 14(3) and 14(4) in order for subsection 14(2) to be satisfied. In these situations, projects must remove the weeds by subdividing the project area (subsection 14(3)) or by other means (subsection 14(4)) as soon as they are able and before the end of the reporting period in which the situations described in subsection 14(2) was identified. If the proponent chooses to try and permanently remove the relevant weed species from an area of land in accordance with subsection 14(4), but is unable to do so before the end of the relevant reporting period, then the area of land must be removed in accordance with subsection 14(3) prior to reporting on that reporting period.

Subsection 14(6) defines what the *relevant date* is in subparagraph 14(2)(b)(ii), this being the date of the section 22 application or section 29 application in which the project area is first identified.

Proponents can transfer project areas containing weeds to this Determination, provided they follow the provisions in subsections 14(3), 14(4) and 14(5). When a relevant decision on a transferring project area is made, paragraph 14(2)(b) is taken to not apply. The relevant application for the transferring project area must indicate how either the area of land containing weeds will be removed from the project area through subdivision and removal (subsection 14(3)) or permanently removed in accordance with subsection 25(4)(b). Further detail on the requirements relating to project areas that would fit the description of subparagraphs 14(2)(b)(i), (ii) or (iii) is provided in subsections 25(4) and (5).

It is important to note that subsection 23(8) of the Rule requires subdivisions to be taken to apply for every year of the reporting period.

15 Variations to project areas

Subsection 15(1) defines circumstances after the start of the crediting period when a sequestration project can make variations to its project areas. The proponent can apply to vary a project area by applying for a variation to the project's section 27 declaration, so long as the variation is (a) to add a new project area, (b) to subdivide a project area into two or more subdivided project areas and (c) to remove an entire project area and not replace it. A note

explains that project areas cannot be increased in size through applying for a variation to a section 27 declaration. Instead the additional area can be added as a new project area through such a variation.

Subsection 15(2) clarifies how a project area can be subdivided. The *original project area* must be divided into two or more smaller *subdivided project areas* such that the areas of land covered by all the subdivided project areas is identical to the area of land covered by the original project area. In this Determination, the smaller project areas created by subdividing an original project area are defined as *subdivided project areas*.

Division 3 Project activity

16 Requirement to undertake savanna fire management

Subsection 16(1) provides that the project proponent must undertake planned burning in each project area in each calendar year. Annual planned burning using cooler, small early dry season fires, if done strategically, will reduce the number and size of large, high intensity late dry season fires. This will result in a reduction of greenhouse gas emissions and an increase in stored carbon. The risk of annual late dry season fires remains high in the absence of strategic annual fire management in the early dry season. Breaking up the fuel load across the landscape reduces the rate of spread of late dry season fires, resulting in fewer and smaller late dry season fires.

Planned burning that occurs predominantly in the early dry season that produces an age-class mosaic of burnt and unburnt patches across the landscape has the effect of creating a discontinuous fuel load that slows or stops the spread of fires across the project area. Mosaic burning reduces the risk of occurrence and extent of late dry season fires, resulting in an increase in carbon sequestered in dead organic matter and a reduction in greenhouse gas emissions.

Planned burning in the late dry season is permitted as this may include the use of fire to control unplanned fire activity, such as the burning of containment lines. The aim of these containment lines is to reduce the spread of unplanned fire, thus reducing the overall area burnt during the late dry season. Fire suppression activities are also permitted and proposed suppression approaches could be included in a project management plan.

Subject to meeting the requirement of subsection 16(2), the Determination does not prescribe a particular type or amount of planned burning, and so project proponents have a degree of flexibility as to how they conduct their savanna sequestration projects. The planned burning must meet the objectives of savanna fire management described in subsection 11(3). The objectives set out in section 11 of the Determination are most easily achieved if the fire management results in an increase in fire activity in the early dry season and a decrease in fire activity in the late dry season. In most circumstances, this will result in a reduction in the overall fire frequency in the project area and a reduction in the total area burnt in the project area.

Subsection 16(2) provides that the planned burning that is undertaken during the permanence period, must ensure that the pattern of past, present and future planned and unplanned burning for the remainder of the permanence obligation period in each project area will be expected to meet the objectives referred to in paragraph 11(1)(a) (see paragraph (2)(d)). These objectives are to reduce emissions of greenhouse gases and increase stores of carbon in dead organic matter.

The pattern of burning must also be one that could reasonably be expected to ensure that the amount of carbon sequestered in the project area as a result of undertaking the project does not decrease significantly over the permanence obligation period for the project (paragraph 2(e)).

Subsection 16(3) acknowledges that proponents may not be able to achieve the annual planned burning for a project area in a particular project year due to circumstances beyond their reasonable control. Provided that the proponent can demonstrate that the failure to undertake planned burning in a particular year resulted from circumstances beyond their reasonable control, they have not contravened subsection 16(1). Under these circumstances, the proponent must provide the Regulator and an auditor with a reasonable set of circumstances that justifies why they were unable to undertake planned burning in accordance with this Determination. The intention of this ‘reasonable control’ requirement is that the test would be the same as that applied under sections 82, 90 and 91 of the Act when determining whether particular conduct is within the reasonable control of the project proponent.

There are a number of circumstances that are beyond the proponent’s reasonable control that could prevent the ability to undertake planned burning in a year. One example of these circumstances would be a late finish to the wet season that leaves vegetation too moist for planned burning for most or all of the early dry season. Another example of these circumstances would be extensive late dry season fires in the previous fire season. These late dry season fires may have burnt the majority of the project area or used a significant proportion of the fire management resources for the subsequent fire season. In this example, project proponents may be able to demonstrate that suppression efforts during the large late dry season fires were consistent with subsection 16(2), and in meeting the objectives outlined in paragraph 11(1)(a) (see paragraph (2)(d)). Another example would be if resources such as helicopters and rangers were unable to complete the planned burning for reasons beyond the proponent’s reasonable control.

Financial difficulty is not something that would always be considered as circumstances beyond the proponent’s reasonable control. For example, not having the finances or cash flow to undertake planned burning as a consequence of poor fire management is not a reasonable reason to not burn

Subsection 16(4) provides that if the project area has been subdivided into two or more subdivided project areas in accordance with section 15, then, for the purposes of this section, planned burning that occurred on the original project area before the area was subdivided may be considered to have occurred on the subdivided project area. That is, if in previous years planned burning was undertaken in the original project area in accordance with subsections 16(1-3), then it will be assumed that these conditions have been met for each subdivided project area.

A note to this section acknowledges that in monitoring whether a project continues to meet the requirements of section 16, the Regulator will consider a range of information, including the project management plan in an offsets report under subsection 36(3) and the information in any SavBAT 3 reports relating to the project.

Example: Excluded activities

Example

The Determination does not allow projects in which fire is deliberately excluded from the project area. This does not comply with the project activity that is covered in subsection 16(1) of this Determination.

Examples: Included activities

Example 1

Subsection 16(2) of the Determination does not preclude proponents from undertaking suppression activities or undertaking planned burning in the late dry season – if these activities are likely to contribute to meeting the objectives set out in subsection 11(1).

Example 2

Subsection 16(2) of the Determination does not preclude proponents from undertaking *mosaic burning*. Mosaic burning results in adjacent patches of land in the project area being burnt and unburnt. This creates a discontinuous fuel load across the project area that slows or prevents the spread of fires across the landscape.

Example 3

A project proponent undertakes planned fire management burning in each project area in the first three years of the project, such that the conditions of subsection 16(1) and (2) are met. In project year four, the wet season finishes very late, preventing the proponent from undertaking any planned burning during the early dry season. The project remains eligible as, according to subsection 16(3) there are circumstances beyond the proponent's reasonable control that have prevented the proponent undertaking savanna fire management by undertaking planned burning.

Example 4

A project proponent undertakes planned burning according to their annual project management plan for each of the first five project years. During the late dry season of project year five, a large unplanned wildfire burns their entire project area, despite their strategic fire management in earlier years and their extensive suppression efforts to contain the fire. In project year six, the proponent does not undertake planned burning in either the early or late dry season, as fuel loads are minimal as a result of the unplanned fire, and resourcing is limited due to the large suppression efforts a few months earlier. The project remains eligible under subsection 16(3) as the proponent can demonstrate that there were circumstances beyond their control that prevented them from completing planned burning for project year six.

17 Project management plan

Subsections 17(1) and (2) provide that projects are only eligible if project proponents prepare a **project management plan** for each calendar year. For a 100-year permanence period project, this means that a project management plan must be prepared for each year in the 100-year permanence period. For a 25-year permanence period project, this will mean that a project management plan must be prepared for each year of the 25-year permanence period.

Subsection 17(1) requires proponents to prepare an annual project management plan that describes all planned burning for that year in each project area. The annual project management plan must describe the planned burning that is intended to be undertaken during the fire season of that year. The project management plan could also demonstrate how the planned burning would contribute to achieving the objectives defined in paragraph 11(1)(a).

Planned burning includes all fire management undertaken in each project area – regardless of whether the objective of the burn is to meet the requirements in section 11 of this Determination or meet other objectives – for example asset protection or enhance biodiversity values. The planned burning program can be revised or updated after it was made, and these may be captured in updates to the Project Management Plan in accordance with subsection 17(4). Unforeseen changes may not be captured under subsection 17(4), and these must be reported on as part of the reporting requirements under subsection 36(3).

There is a requirement to report for each calendar year on the planned burning. Subsection 36(3) requires proponents to report on the extent to which planned burning satisfied the project activity, consistent with section 16 of this Determination (subparagraph 36(3)(a)(iii)). (Section 16(2) requires that the pattern of all planned and unplanned burning meets the objectives of section 11.) This includes all planned burns that occurred, regardless of whether they successfully met their objectives or not. Under paragraph 36(3)(b), if planned burning did not occur, the proponent is required to provide the reasons why this was the case, consistent with subsection 16(3).

Subsection 17(3) provides that the annual project management plan must be prepared before the planned burning for that year commences. If the project proponent already completes another annual plan, such as a fire management plan, that is completed before the commencement of burning during the fire season and describes the intended fire management activities in a manner consistent with this Determination, then this can be considered as a project management plan.

Subsection 17(4) provides that updates and revisions to the project management plan are permitted during the fire season. These updates and revisions must be dated in accordance with both subsection 17(5) and reporting requirement paragraph 36(3)(c). These updates or revisions could reflect adjustments resulting from a change in circumstances. For example, planned burns may be re-prioritised if the wet season is extended and there is only opportunity to undertake some of the planned burning.

The first note under subsection 17(5) refers to paragraph 36(3)(c) for reporting requirements for project management plans. Project proponents are required to submit their annual project management plan with their offsets report.

The second note under subsection 17(5) clarifies how the project management plan is one of a suite of documents used by the Regulator when assessing whether the project continues to meet the project eligibility requirements in section 16. While proponents must prepare an annual project management plan to show their intended planned burning, projects do not become ineligible if they do not follow a project management plan. However, if project proponents fail to prepare their project management plan each year, then the Regulator could revoke the project's declaration under section 27 of the Act.

The third note under subsection 17(5) notes that the savanna technical guidance document may provide guidance as to how to prepare a project management plan. A project proponent is not required to follow the guidance set out in the savanna technical guidance document.

The fourth note under subsection 17(5) notes that a single project management plan can refer to one or more project areas.

Division 4 Vegetation fuel type map

18 Requirement to create and validate vegetation fuel type map

Subsection 18(1) states that, this section applies when a section 22 application is made for a new project to be declared eligible, and when new project areas are added to an existing project (when a section 29 application is made). A note states that this section does not apply when a section 29 application is made that only results in subdividing a project area as described in paragraph 15(1)(b).

Subsection 18(2) provides that project proponents must create and validate a vegetation fuel type map for all new project areas – whether they are part of a new project or being added to an existing project. Project proponents are required to follow the instructions relating to the creation and validation of vegetation fuel type maps contained within the savanna technical guidance document.

Different provisions apply for creating and validating vegetation fuel type maps for project areas that are transferring from either a savanna emissions avoidance or sequestration project. Provisions for transferring project areas are found in section 27 of this Determination.

Subsection 18(3) provides that each map must be created and validated in accordance with the savanna technical guidance document. A vegetation fuel type map is a map showing where the vegetation fuel types listed in the savanna technical guidance document occur in each project area, as well as where these vegetation fuel types do not exist.

Paragraph 18(3)(a) requires the project proponent to assign a code to each mapping unit of the map, in accordance with the savanna technical guidance document. A note to subsection 18(3) indicates that the savanna technical guidance document sets out how to identify the appropriate vegetation fuel type for the area of land represented by a mapping unit, and how

to work out whether the mapping unit is ineligible – that is, it might be cleared land, have a relevant weed species present, or be dominated by other vegetation. The savanna technical guidance document provides descriptions of the dominant overstorey and understorey species for each vegetation fuel type. These descriptions must be used to identify the vegetation fuel types. The savanna technical guidance document also describes how vegetation fuel type maps must be validated, including using GIS, remote sensing and field observations.

Subsection 18(4) requires that each vegetation fuel type map must be created and validated so it can be submitted with the first reports on the relevant project area. For a new project reporting on all project areas, this would be the first offsets report. For a project that has added a new project area and is reporting on all project areas, this is the first offsets report after adding the new project area. The map must be submitted with an ERF audit report relating to the validation of the map, if that was required (See subsection 36(4)).

19 Revisions to vegetation fuel type map

This section applies regardless of the methodology determination under which the vegetation fuel type map had been created and validated, or under which methodology determination the vegetation fuel type map may subsequently have been revised and validated.

Subsection 19(1) describes when proponents must revise their existing vegetation fuel type map to re-classify mapping units. Revisions to the vegetation fuel type map must be undertaken if the code assigned to the area of land is for a vegetation fuel type (paragraph 19(1)(a)), and it becomes apparent that the classification was incorrect, and that area of land is in fact ineligible (does not contain a vegetation fuel type described in the savanna technical guidance document) (subparagraph 19(1)(b)(i)) or if the classification of the mapping unit is not in accordance with the savanna technical guidance document (subparagraph 19(1)(b)(ii)). Proponents may become aware of these changes in response to required or optional monitoring requirements, or some other means. This subsection is relevant in relation to mapping units that were originally incorrectly classified as having a vegetation fuel type, if it is realised that the classification was incorrect or if the original classification is not, or is no longer in accordance with the savanna technical guidance document. Proponents must re-classify their vegetation fuel type map under these circumstances.

A project area containing a relevant weed species, or which contained a vegetation fuel type at the date of either the section 22 or 29 application but no longer does (fitting the conditions of 14(2)(b)(i) or (ii)), is required to follow the provisions of section 14 of this determination. That is, if the mapping unit originally had a vegetation fuel type, but no longer does – for example it was cleared, then a map revision is not required. Similarly if the mapping unit originally had a vegetation fuel type, but a relevant weed species has been detected, then a map revision is not required. Instead the requirements under section 14 are relevant.

Subsection 19(2) provides that the proponent may choose to revise the vegetation fuel type map if they discover that a mapping unit that should have been classified as having a vegetation fuel type was incorrectly classified as being ineligible. In that case, the proponent may, but is not required to, revise their vegetation fuel type map accordingly.

Subsection 19(2) is also applicable if an additional vegetation fuel type is added to the savanna technical guidance document. In this instance, the project proponent may choose to, but is not required to, re-classify mapping units that contain the new vegetation fuel type. This may occur if the vegetation was classified as ineligible under section 18 but can now be classified differently in accordance with subsection 19(2).

Subsections 19(3) and 19(4) describe how a vegetation fuel type map is to be revised and validated.

Subsection 19(3) provides that if a mapping unit is re-classified under section 19, the revised map must be validated in accordance with the savanna technical guidance document.

A note to this paragraph provides that if the area of land being re-classified is a material proportion of the total area of land, the entire vegetation fuel type map containing the revisions will require validation in accordance with the savanna technical guidance document. A material proportion is defined in the savanna technical guidance document.

Paragraph 19(4)(a) provides that the revision and validation must be done in accordance with the savanna technical guidance document.

Paragraph 19(4)(b) provides that if the revision is required by subsection (1), the revision and validation (if necessary) must be completed before submitting the offset report for that reporting period in which the project proponent identified that areas of land were incorrectly classified.

Paragraph 19(4)(c) provides that if paragraph 19(4)(b) does not apply then the revision and (if necessary) validation must be completed before the project proponent submits their first offsets report under this Determination using the revised map. A proponent cannot base their report on a map that has not been correctly validated.

A note beneath subsection 19(4) clarifies that the version of the vegetation fuel type map at the end of a reporting period must be used for all years within that reporting period, in accordance with subsection 10(1).

20 Vegetation fuel type map for subdivided project area

Subsection 20(1) provides that this section is only applicable if a vegetation fuel type map for a project area has already been created and validated, or revised and validated (where necessary) in accordance with this Determination (paragraph 20(1)(a)) and that project area is later subdivided into two or more subdivided project areas (paragraph 20(1)(b)). There are many reasons why a project proponent may elect to subdivide a project area. For example, they may choose to subdivide a project area in order to move part of the area to a new savanna project, or because it contains weeds or has been cleared and needs to be removed from the project.

Paragraph 20(2)(a) provides that the vegetation fuel type map for the original project area can be used to represent the vegetation fuel type map for each subdivided project area created by subdividing the project area into two or more smaller project areas.

Paragraph 20(2)(b) provides that as the vegetation fuel type map for the subdivided project area was created and validated, or revised and validated (where necessary) in accordance with this Determination for the original project area, the map for the subdivided project area will be considered to have met the provisions in this Determination for creating and validating vegetation maps.

Division 5 Additionality

21 Requirement in lieu of newness requirement

Subsection 21(1) of this Determination provides that section 21 specifies a requirement in lieu of the newness requirement in the Act, as provided for in subparagraph 27(4A)(a)(ii) of the Act.

Subsection 21(2) provides three situations which satisfy the requirement in lieu of the newness requirement for each project area. Paragraph 21(2)(a) specifies that there is a requirement in lieu of newness that the project area is a transferring project area. Paragraph 21(2)(b) specifies that there is a requirement in lieu of newness that a project covered by a savanna emissions avoidance determination or a savanna sequestration determination has not been undertaken on any part of the project area. Paragraph 21(2)(c) specifies that there is a requirement in lieu of newness for projects that have been undertaken in the project area or even part of the project area, but there has been no Australian carbon credit units that relate to any part of the project area (while the project was covered by a savanna emissions avoidance determination or this Determination). The intent of paragraph 21(2)(c) is to permit projects that were previously registered but never received Australian carbon credit units before being revoked to again be considered a new savanna project where a gap exists between the time that the project was revoked and recommencing the project activity under this determination. This has the practical effect of limiting the application of this Determination to projects that are either transferring from another savanna project, projects that are new projects on land that has not previously contained a savanna project, and new projects on former project areas that have not had Australian carbon credit units issued under any savanna fire management determinations.

Subsection 21(3) specifies the modifications to the operation of some other provisions in this Determination if paragraph 21(2)(c) is met.

A note before subsection 21(3) alerts that for the situations mentioned in that subsection, some other provisions in this Determination will operate in a modified manner. This accounts for a situation where a savanna fire management project had been registered in a project area or part of a project area, but then revoked prior to any Australian carbon credit units being issued, and then a new savanna fire management project is undertaken on the same, or part of the same, project area.

Paragraph 21(3)(a) provides that for the purposes of subsection 14(6) (which deals with the relevant date applicable for determining whether a particular area of land contains a vegetation fuel type), disregard the section 22 application or the section 29 application in

which the project area referred to in paragraph (2)(c) was first identified. This has the practical effect of the relevant date being set by this Determination for a new project.

Paragraph 21(3)(b) provides that for the purposes of subsection 24(1) (which deals with defining a transferring project area), disregard the project referred to in paragraph (2)(c). This has the practical effect of allowing the project that met the requirement in paragraph 2(c) to be considered a new project, rather than a project which has a transferring project area.

Paragraph 21(3)(c) provides that for the purposes of subparagraph 26(2)(d)(i) (which deals with defining the baseline period for a transferring project area), and in determining whether the project area was first added as a result of a section 29 application, disregard the addition of the project area referred to in paragraph (2)(c). This has the practical effect of allowing the project to have a baseline period as if it was a new project – that is, the baseline period ends in the year before the first project year under the current project.

Paragraph 21(3)(d) provides that for the purposes of three paragraphs in the schedules, disregard any values that might have been calculated in relation to the project area referred to in paragraph (2)(c). These are the previous year's uncertainty buffer calculated in paragraph 3(1)(a) of Schedule 1; the previous year's carry-over amount for carbon sequestration calculated in paragraph 3(1)(a) of Schedule 2; and the amount of carbon sequestered for all project years up until the end of the previous year, $C_{Seq,Prev}$ in subsection 4(1) of Schedule 2.

The effect of subsection 21(3) is to ensure that, generally, the earlier project, referred to in paragraph 21(2)(c), is treated as if it had not been undertaken for the purposes of the provisions of the Determination listed in subsection 21(3). This is because, aside from the requirement in lieu of the newness requirement, anything that happened in the earlier project is generally not relevant to the new project being undertaken under this Determination.

The exception to this general principle is that any emissions reductions or sequestration of carbon that might have occurred under the earlier project referred to in paragraph 21(2)(c) are taken into account in determining baseline amounts under the new project under the Determination.

22 Requirement in lieu of regulatory additionality requirement

Subsection 22(1) provides that section 22 specifies a requirement in lieu of the regulatory additionality requirement in the Act, as provided for in subparagraph 27(4A)(b)(ii) of the Act.

Subsection 22(2) of this Determination provides that the project must not include land where it is required by or under a law of the Commonwealth, a State or Territory to carry out fire management for the primary purpose of reducing emissions from fire or sequestering carbon in dead organic matter.

The effect of section 22 is that if a project proponent is required by or under a Commonwealth, State or Territory law to reduce emissions from fire or sequester carbon in dead organic matter on that land, then the project will not meet the requirement in lieu of regulatory additionality. In this situation, the project cannot be declared an eligible offsets project, as it will not produce additional abatement. However, if a project is required by a

Commonwealth, State or Territory law to undertake planned fire management for any other purpose, such as asset protection, then the project will not fail this eligibility requirement.

Examples: Regulatory additionality requirement

Example 1

A land manager is proposing to undertake a project under this Determination on land where fire management also will be undertaken for the primary purpose of protecting property. This fire management is not required by law. As the primary purpose of the fire management is for property protection, and not to either reduce emissions from fire or sequester carbon in dead organic matter as a result of the fire management in accordance with any Commonwealth, State or Territory law, the requirement in lieu of the regulatory additionality requirement will be satisfied.

Example 2

A land manager is undertaking fire management aimed at enhancing biodiversity values on the land in accordance with a State government law. The land manager now wishes to undertake a project under this Determination on the same land. Because the primary purpose of the fire management as required by law is to enhance biodiversity values and not to reduce emissions from fire or to sequester carbon in dead organic matter, the regulatory additionality requirement will be satisfied.

Division 6 Projects that include transferring project areas

23 Simplified outline of this Division

This section provides a simplified outline of this Division. While simplified outlines are included to assist readers to understand the substantive provisions, the outlines are not intended to be comprehensive. It is intended that readers should rely on the substantive provisions.

This Division has provisions for project areas that were previously part of either a savanna emissions avoidance project or a savanna sequestration project and that are to become a new savanna sequestration project. These project areas are known as transferring project areas.

Projects or project areas may transfer from a former savanna project to a project under this Determination in several ways, depending on whether the Carbon Credits (Carbon Farming Initiative) Amendment Bill 2017 has passed Parliament and commenced as the *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018*.

Project areas may be moved between savanna sequestration projects in accordance with section 23 of the Rule. The project's crediting period would be adjusted in accordance with section 53 of the Rule.

There are two options for transferring project areas from a savanna emissions avoidance project to new projects under this Determination, depending on whether the *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* has commenced.

Restarting transferring projects

Restarting transferring projects use provisions in the Rule to move project areas from an existing project to a new project under this Determination.

If the proponent wants to move all of the original project's project areas onto a new project covered by this Determination, then this can be achieved through provisions in this Determination and in the Rule. Proponents will have to apply to the Regulator for the revocation of the declaration of the existing eligible offsets project under section 27 of the Act (**section 27 declaration**) that relates to the emissions avoidance project. The proponent would also need to make a new section 22 application for the new savanna sequestration project in accordance with section 30A of the Rule. This application must include one or more project areas that are identical to the project areas under the emissions avoidance project. The section 22 application for the new savanna sequestration project must be accompanied by an application under section 30A of the Rule to enable the Regulator to revoke the former project's section 27 declaration. The effect is that the revocation of the former project's section 27 declaration is conditional upon the new project being declared an eligible offsets project. This removes the risk of the former project being revoked before the new project is declared eligible. Accordingly, as part of the application for a sequestration project, the proponent will specify that the applicant wishes the declaration in relation to the former project to be revoked if, and only if, the new project is to be declared an eligible offsets project.

For restarting transferring projects, when assessing the section 22 application for a sequestration project and the application to revoke or vary the section 27 declaration of the old project, the Regulator cannot approve the applications until all the following conditions (which are set out in the Rule) are fulfilled:

- a) the project proponent has submitted an offsets report for the emissions avoidance project that covers the most recent full calendar year and all project areas;
- b) certificates of entitlement arising from that report have been issued, and ACCUs (if any) have been issued; and
- c) there is sufficient time remaining in the calendar year for the new project to be declared an eligible offsets project.

The Regulator will then decide whether the new savanna sequestration project should be declared an eligible offsets project. If the new project is to be declared eligible, then the Regulator will:

- a) revoke or vary the section 27 declaration for the former project; and
- b) immediately afterwards, make the section 27 declaration for the new project.

This sequence of events avoids any potential gap between the revocation of the former project and the approval of the new project under this Determination.

If the proponent only wants to move some of the original project's project areas to a new project covered by this Determination, then the original project's section 27 declaration would need to be varied to remove the transferring project area or areas. The proponent would also need to make a new section 22 application to apply to move the project areas to a new savanna sequestration project in accordance with section 30B of the Rule.

In either case, a new savanna sequestration project would need to be declared as an eligible offsets project, and would have a new crediting period. This new crediting period is defined in section 69 of the Act, and in some cases, will be modified by section 28 of this Determination.

Continuing transferring projects

If the *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* has commenced there is an additional option for moving projects from an emissions avoidance project to a sequestration offsets project under this Determination. After the Act amendment has commenced, ***continuing transferring projects*** use sections 128-130 of the Act to request to move project areas from an existing emissions avoidance project onto a project under this Determination. The Regulator could approve the application of this Determination to the original project, under section 130 of the Act. The project would retain the same project area or areas. In that case, the project's existing crediting period would continue. If the crediting period ends after the permanence period, the permanence obligations to maintain carbon stocks remain until the end of the crediting period.

Eligible Interest Holder Consents

To have their application for a savanna sequestration project that is either a restarting transferring project or a continuing transferring project to be approved, the proponent must provide evidence with their application that all persons who hold an eligible interest in the project area of the new project have consented to the making of the application for that new project.

Transferring savanna sequestration projects applying after the *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* has commenced will need to provide evidence of all eligible interest holder consents prior to approval. New projects on areas that have never been part of the scheme can gain conditional approvals subject to obtaining all eligible interest holder consents prior to reporting.

To ensure the permanence obligations under the Act are complied with, it is not possible, *before the Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* has commenced, for:

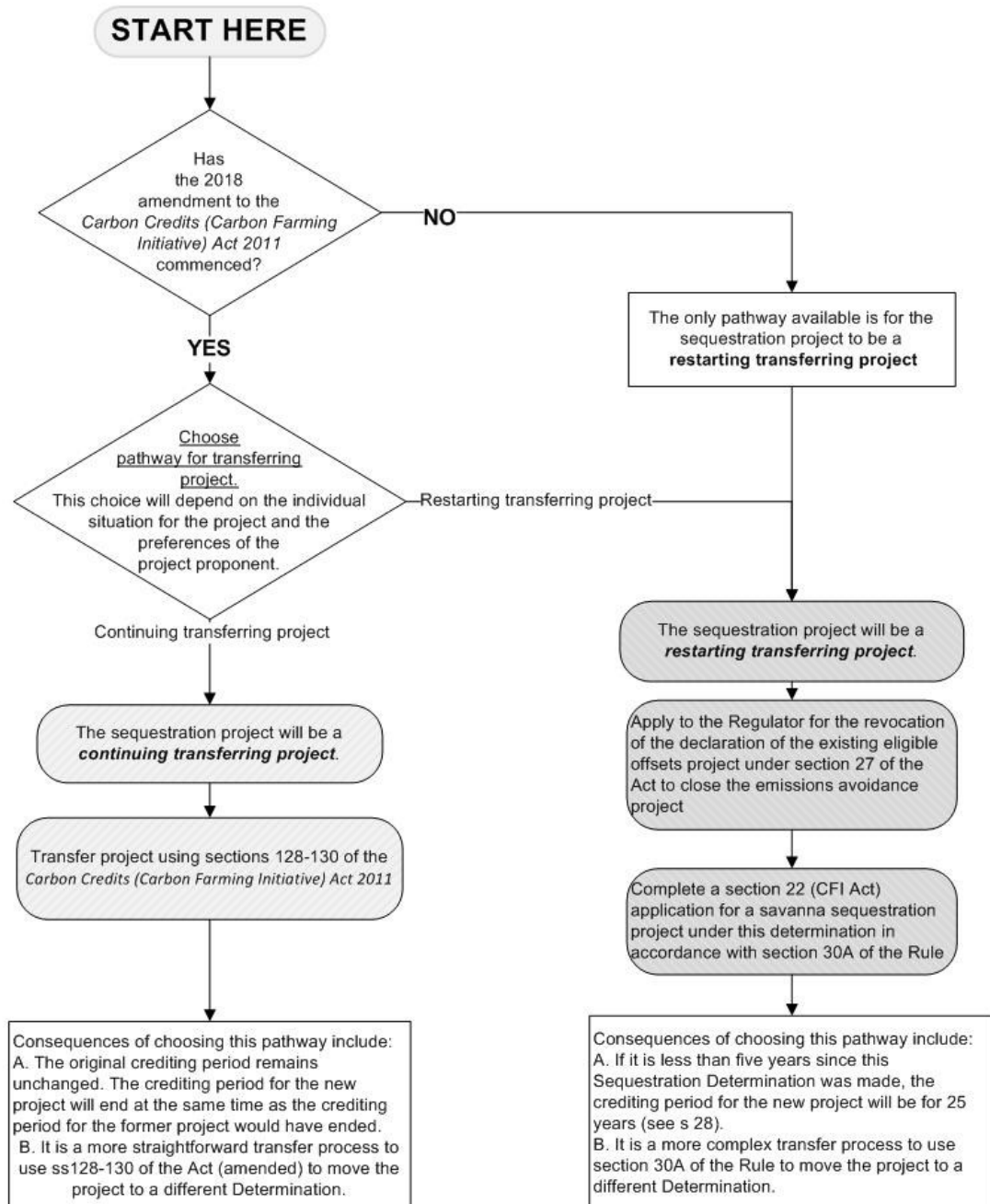
- the Regulator to approve the application of this Determination to an existing project under a savanna emissions avoidance determination using the process set out in sections 128, 129, and 130 of the Act; or
- a project area that is covered by a savanna emissions avoidance determination to be transferred to a project area covered by this Determination in accordance with section 23 of the Rule.

Pathways for transferring projects, crediting periods and permanence periods

Below are three examples of how projects areas can be moved from an emissions avoidance project to a sequestration project under this Determination.

Example pathway 1: Transferring Projects (Continuing or Re-starting)

Scenario: A project proponent has an existing emissions avoidance project (under any emissions avoidance Determination). The proponent wishes to move the entire project (including all project areas) to be a new savanna sequestration project under this Determination.



Example 1: Transfer the whole project from a savanna emissions avoidance project to this Determination as a *restarting transferring project*

A proponent wishes to move their whole project from a savanna emissions avoidance determination to this Determination. The *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* has not commenced, so they can only be a *restarting transferring project*.

They apply to the Regulator, and must supply all of the following, consistent with section 30A of the Rule:

- (i) A section 27 application to revoke their emissions avoidance project; and
- (ii) A new section 22 application to commence a savanna sequestration project under this Determination; and
- (iii) All eligible interest holder consents relevant to their section 22 application.

The final year of their emissions avoidance project must have been reported on, and must be the calendar year immediately prior to the first calendar year under the sequestration project. The first year they report on under the sequestration project is the calendar year in which they received unconditional approval for the project.

This new crediting period is defined in section 69 of the Act, and in some cases, will be modified by section 28 of this Determination. The project's permanence period would commence the first time they received credits under this Determination.

Example 2: Transfer the whole project from a savanna emissions avoidance project to this Determination as a *continuing transferring project*

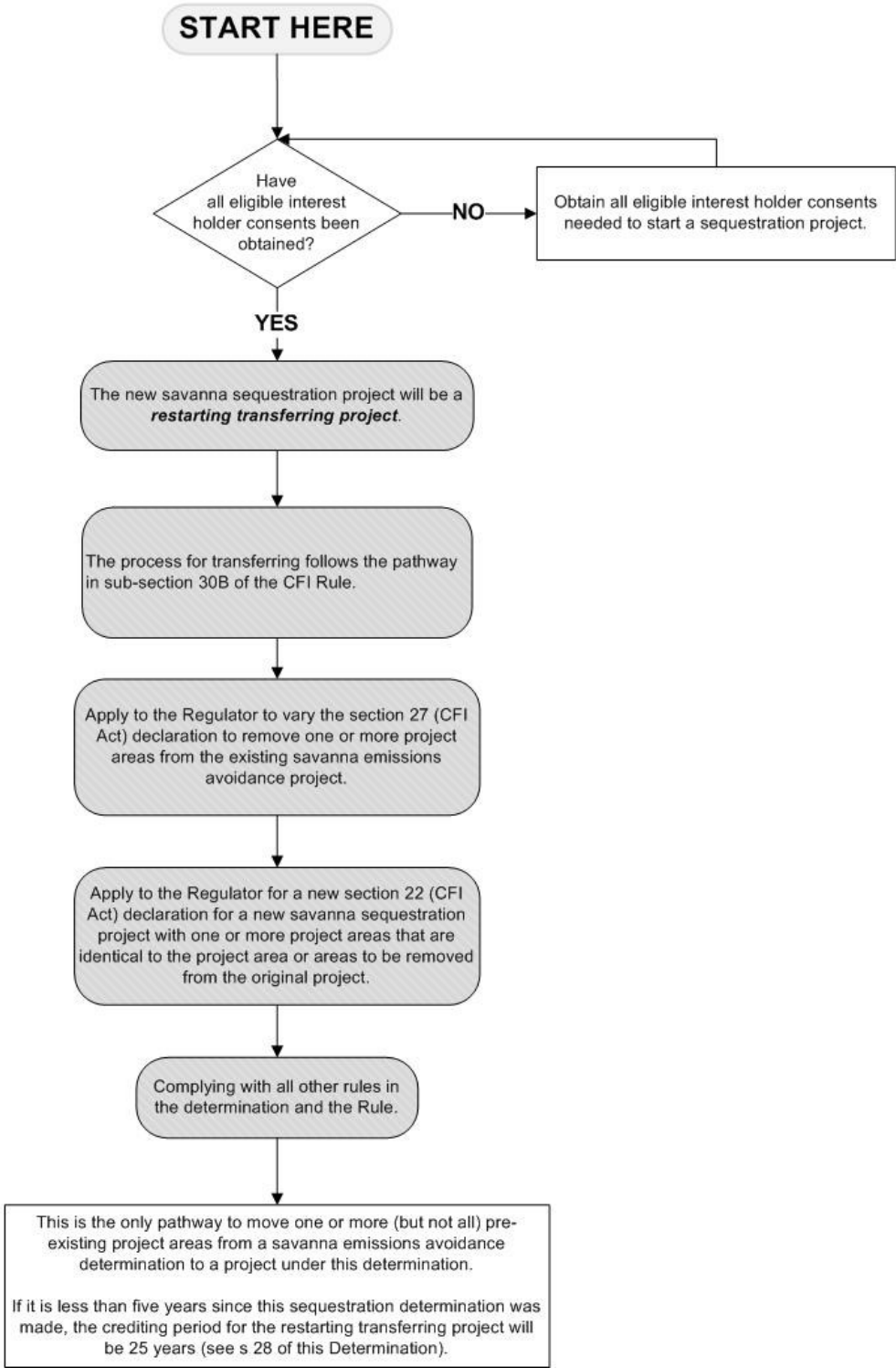
A proponent wishes to move their whole project from a savanna emissions avoidance determination to this Determination. The *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* has commenced, so they can only be a *continuing transferring project*.

They apply to the Regulator using sections 128-130 of the Act to move project areas from an existing emissions avoidance project onto a project under this Determination. The Regulator could approve the application of this Determination to the original project, under section 130 of the Act.

The project's crediting period would continue from that under the former savanna determination, unless provisions under section 28 of this Determination were applicable. The project's permanence period would commence the first time they received credits under the former savanna determination(s).

Example pathway 2: Transferring Project Areas

Scenario: A project proponent has an existing emissions avoidance project (under any emissions avoidance determination). The project has 2 or more existing project areas. The proponent wishes to move 1 or more project areas - but not all - to a new savanna sequestration project under this determination.



Example: Transfer part of a project areas from a savanna emissions avoidance project to this Determination as a *restarting transferring project*

A proponent wishes to move only some of their project areas from a savanna emissions avoidance determination to this Determination. The *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* has not commenced, so they can only be a *restarting transferring project*.

They apply to the Regulator, and must supply all of the following, consistent with section 30A of the Rule:

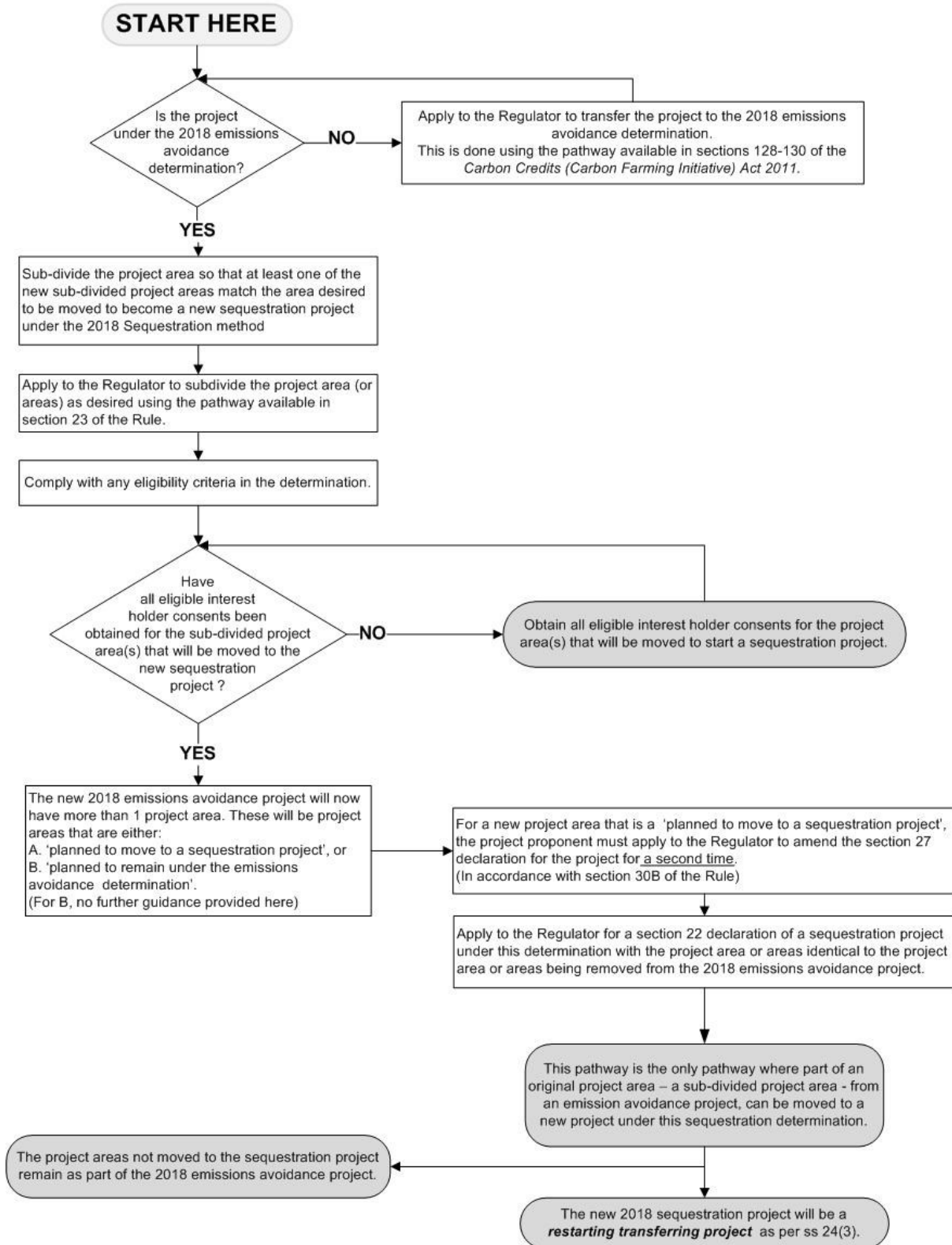
- (i) A section 27 application to vary their project by removing the transferring project area or areas; and
- (ii) A new section 22 application to commence a savanna sequestration project under this Determination, that contains the transferring project areas, and is made in accordance with section 30B of the Rule; and
- (iii) All eligible interest holder consents relevant to their section 22 application.

The final year reported on for the transferring project area(s) under the emissions avoidance project must be the calendar year immediately prior to the first calendar year under the sequestration project. The first year they report on under the sequestration project is the calendar year in which they received unconditional approval for the project.

This new crediting period is defined in section 69 of the Act, and in some cases, will be modified by section 28 of this Determination. The project's permanence period would commence the first time they received credits under this Determination.

Example pathway 3: Transferring Project Areas

Scenario: A project proponent has an existing emissions avoidance project (under any emissions avoidance determination). The proponent wishes to move part of one existing project area to a new savanna sequestration project under this determination.



Example: Transfer part of a project area from a savanna emissions avoidance project to this Determination as a *restarting transferring project*

A proponent wishes to move only part of one project area from a savanna emissions avoidance determination to this Determination. The *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* has not commenced, so the new sequestration project can only be a *restarting transferring project*.

If the emissions avoidance project is not under the *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Emissions Avoidance) Methodology Determination 2018* then they must transfer the whole project to this determination, as it will allow them to subdivide the project area so part of it can be moved to the new sequestration project. To do this, they must apply to the Regulator using:

- (i) A section 27 application to revoke their former emissions avoidance project; and
- (ii) A new section 22 application to commence a new savanna emissions avoidance project under this Determination.

The final year of their former emissions avoidance project must have been reported on, and must be the calendar year immediately prior to the first calendar year under the new emissions avoidance project.

The project area containing the land that is to be transferred to the new sequestration project must be subdivided in accordance with section 15(2) of the *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Emissions Avoidance) Methodology Determination 2018*. One subdivided project area contains land that is to be transferred to the new sequestration project, and the other subdivided project area contains land that is to remain on the emissions avoidance determination.

The project must then apply to the Regulator to move the applicable subdivided project area to a new sequestration project. They apply to the Regulator, and must supply all of the following, consistent with section 30A of the Rule:

- (i) A section 27 application to vary their project and remove the transferring project area or areas; and
- (ii) A new section 22 application to commence a savanna sequestration project under this Determination, that contains the transferring project area, and is made in accordance with section 30B of the Rule; and
- (iii) All eligible interest holder consents relevant to their section 22 application.

The final year of their emissions avoidance project must have been reported on, and must be the calendar year immediately prior to the first calendar year under the sequestration project. The first year they report on under the sequestration project is the calendar year in which they received unconditional approval for the project.

This new crediting period is defined in section 69 of the Act, and in some cases, will be modified by section 28 of this Determination. The project's permanence period would commence the first time they received credits under this Determination.

24 Meaning of *transferring project area* and related definitions

A note at the start of section 24 outlines that this section sets out some definitions that are relevant for projects that were previously covered by a savanna emissions avoidance determination or to projects that contain an area of land that had been part of a project covered by a savanna emissions avoidance determination, or another project covered by this Determination.

Projects such as these contain at least one *transferring project area*. This Determination has special rules for transferring project areas.

A project that contains a transferring project area could be a *continuing transferring project* or a *restarting transferring project*, or it might be neither. This Determination makes special rules for continuing transferring projects and restarting transferring projects.

Subsection 24(1) defines a *transferring project area* for a savanna sequestration project under this Determination. A transferring project area is a project area that was a project area under either a savanna emissions avoidance project or this Determination immediately before it was transferred to a new project under this Determination.

The project area, or project areas, of the new savanna sequestration project must be identical to the project area, or project areas, under the former project. The project areas must be identical to allow for the baseline period and uncertainty buffer under the former project to be maintained under this Determination. This ensures consistent accounting of carbon sequestration and emissions through time.

A note under subsection 24(1) notes that subsection (1) is sometimes modified if the requirements in lieu of newness requirement (paragraph 21(2)(c)) was met – see paragraph 21(3)(b).

Subsection 24(2) defines the *former determination* as the methodology determination that the transferring project area was under immediately before it became a project area in a project under this Determination. For example, if a project area was under the *Carbon Credits (Carbon Farming Initiative) (Reduction of Greenhouse Gas Emissions through Early Dry Season Savanna Burning—1.1) Methodology Determination 2013*, then transferred to the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015* two years before applying to transfer to this Determination, then the former determination would be the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015*.

In this Determination the terms *continuing transferring project* and *restarting transferring project* have specific meanings that reflect how the project came to be covered by this Determination.

Subsection 24(3) defines a continuing transferring project. Such projects will only be possible after the *Carbon Credits (Carbon Farming Initiative) Amendment Act 2018* has commenced. A continuing transferring project is one that transferred from a savanna emissions avoidance project (the former project) onto this Determination when the Regulator approved the application of this Determination to the project under section 130 of the Act after it was amended. The project first becomes a continuing transferring project when this Determination first applied to the project, and the project contains one or more project areas that were transferring project areas.

Subsection 24(3) also defines a restarting transferring project if it transfers one or more project areas from a savanna emissions avoidance project (the former project). Projects can be a restarting project before or after the amending Act commences. For the restarting transferring project, the original project's section 27 declaration was either revoked or varied to remove the transferring project areas.

25 Eligibility requirement for projects with transferring project area

Eligibility requirements—all projects that have a transferring project area

Subsection 25(1) provides that for all projects that contain transferring project areas, the final calendar year under the former determination and the first calendar year under this Determination must be consecutive. This subsection ensures that the proponent is not at risk of having a gap between the former project and the new savanna sequestration project.

Eligibility requirements—restarting transferring projects

There are two eligibility requirements specific for restarting transferring projects.

Subsection 25(2) provides that for restarting transferring projects, each transferring project area must have a savanna emissions avoidance project as its former determination.

Subsection 25(3) requires that all restarting transferring projects must be declared eligible in accordance with the process set out in section 30A or 30B of the Rule.

Eligibility requirements—requirements relating to project areas

Subsection 25(4) provides for the instance where a transferring project area would, in the absence of this subsection, fit the description of one of subparagraphs 14(2)(b)(i), (ii) or (iii). As a result of subsection 25(4), paragraph 14(2)(b) does not apply, so long as the relevant application for the transferring project area meets the requirements of either paragraph 25(4)(a) or (b). Paragraph 25(4)(a) requires the relevant application for the transferring project area to indicate that the area of land, that would meet the description of a subparagraph of 14(2)(b), will be removed in accordance with subsection 14(3). Paragraph 25(4)(b) requires the relevant application for the transferring project area to indicate that the area of land that would meet the description of subparagraph 14(2)(b)(i), will be permanently removed in accordance with 25(4)(b)(ii).

Subsection 25(5) provides the definitions for ‘*relevant application*’ and ‘*relevant decision on a transferring project area*’, as they are applied in subsection 25(4).

26 Baseline period—transferring project area

Subsection 26(1) specifies that this section defines the baseline period for areas of land in transferring project areas. Section 8 of this Determination defines the baseline period for areas of land other than those in transferring project areas.

Subsection 26(2) defines the baseline period for areas of land in transferring project areas where the former determination was the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015* and the project area included areas of land in both the high and low rainfall zones. The baseline period is the same length as defined in subsection 8(1) of this Determination. That is, the baseline period will be a period of 10 years for an area of land in the high rainfall zone, and a period of 15 years for an area of land in the low rainfall zone. Paragraph 26(2)(d) specifies the last year for a baseline period.

Subparagraph (i) deals with transferring project areas that were added after commencement of the former project. In that case, the calendar year immediately before the additional project area was added will be the last year of the baseline period for land in that project area.

Subparagraph (ii) deals with situations not covered by subparagraph (i); the baseline period ends immediately before the first project year of the project.

A note below subsection 26(2) notes that subparagraph (i) can be modified in some cases if the requirement in lieu of newness requirement specified in paragraph 21(2)(c) was met. See also paragraph 21 (3)(c).

Subsection 26(3) states that in all other instances, the baseline period for the project area or project area part is the same as the baseline period under the former determination for the project area.

Examples: Calculation of baseline period for transferring projects

Example 1

In 2015, a project proponent commenced a new savanna fire management project with a single project area wholly in the high rainfall zone under the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015* (the **2015 Determination**). Under the 2015 Determination, the baseline period for the project area ended in 2014. In 2020, the proponent elected to move their project to this Determination. The baseline period for the transferring project area ended in 2014.

Example 2

In 2014, a project proponent commenced a new savanna fire management project under the *Carbon Credits (Carbon Farming Initiative) (Reduction of Greenhouse Gas Emissions*

through Early Dry Season Savanna Burning – 1.1) Methodology Determination 2013 (the **2013 Determination**). Under the 2013 Determination, the baseline period does not have to end in the year immediately prior to starting the project. For this project, the proponent elected a baseline period that ended in the year 2012 for its two project areas. In 2021, the project proponent elects to move the project to this Determination. The baseline period for the transferring project area ends in 2012.

Example 3

In 2014, a project proponent commenced a new savanna fire management project under the 2013 Determination. Under the 2013 Determination, the baseline period does not have to end in the year immediately prior to starting the project. For this project, the baseline ended in the year 2012. The project transferred to the 2015 Determination in 2016 and then to this Determination in 2020. The baseline period for the transferring project area ends in 2012.

Example 4

In 2016, a project proponent commenced a new savanna fire management project with a single project area in the low rainfall zone under the 2015 Determination. Under the 2015 Determination, the baseline period for the project area ended in 2015. In 2017, the proponent added a second project area, also in the low rainfall zone, to their project – the same year that a variation to their section 27 application came into effect. For the second project area, the baseline ended in 2016. In 2020, the proponent moved both project areas to this Determination. The first project area would have a baseline period that ended in 2015, and the second project area would have a baseline period that ended in 2016.

27 Vegetation fuel type map for transferring project area

Subsection 27(1) provides that this section applies for savanna sequestration projects that contain one or more transferring project areas for which a vegetation fuel type map was created and validated under a former determination.

Subsection 27(2) provides that the vegetation fuel type map created for a transferring project area under the former determination is considered to be an acceptable vegetation fuel type map for this Determination, and pixels of the map are taken to be mapping units.

Subsection 27(3) specifies that the code assigned to each reference to a vegetation class on the vegetation fuel type map created and validated in accordance with the former determination is considered to contain the corresponding vegetation fuel type for this Determination. For example, if the mapping unit contained a code for Open forest with mixed grasses in the high rainfall zone (hOFM) under the former determination, then the same code must be applied under this Determination. If the former determination was the *Carbon Farming (Reduction of Greenhouse Gas Emissions through Early Dry Season Savanna Burning) Methodology Determination 2012* or the *Carbon Credits (Carbon Farming Initiative) (Reduction of Greenhouse Gas Emissions through Early Dry Season Savanna Burning—1.1) Methodology Determination 2013* the vegetation codes differed to those used

in this Determination. The savanna technical guidance document provides a table illustrating how to convert these codes to codes relevant under this Determination.

28 Crediting period for some projects that include transferring project areas

The note specifies that subsection 69(2) of the Act provides a general rule that the crediting period for a savanna sequestration project is 25 years for projects that become an eligible offsets project after the commencement of Part 5 of the Act (13 December 2014).

Subsection 28(1) of this Determination specifies another crediting period other than 25 years for some restarting transferring projects. This is consistent with paragraph 69(2)(b) of the Act that allows for a different period to be specified within the applicable methodology determination.

It is possible that some transferring projects under this Determination could have commenced before 13 December 2014. For these transferring projects, subparagraph 70(2)(b)(ii) of the Act allows the applicable methodology determination to specify the length of a second crediting period. Subsection 28(3) of this Determination specifies the length of the second crediting period under these circumstances.

If projects under this Determination are restructured projects, then section 57 of the Act and section 53 of the Rule specify the required adjustments to the crediting period resulting from the restructure. In any other case, see section 69 of the Act for the crediting period.

Subsection 28(1) specifies a different crediting period for savanna sequestration projects that contain a restarting transferring project area, and that made a section 22 application more than 5 years after the commencement of this Determination. That is, this Determination specifies a crediting period in accordance with paragraph 69(2)(b) of the Act. For these projects, a crediting period of $25 - N$ years is specified. For projects with only one project area, the value of N is equal to the number of calendar years that were reported on under all former determinations. For projects with more than one project area, the value of N is the greatest value for the number of calendar years that were reported on under all former determinations for each project area that was transferred.

Subsection 28(2) specifies how to calculate the value of N_{TPA} , as the sum of two numbers. The number of calendar years that the project area was reported on while it was an eligible offsets projects under the former Determination is added to the number of calendar years (if there are any) for which the project area was reported on while it was an eligible offsets project under any other Determination.

A note under this subsection explains that for savanna sequestration projects that contain a restarting transferring project area, and if the section 22 application was made less than 5 years after the commencement of this Determination, the crediting period is 25 years. This provision effectively extends the crediting period for these projects.

Subsection 28(3) acknowledges that if the project to which the transferring project area previously belonged first commenced prior to 13 December 2014 then it could have two crediting periods as a result of subsection 70(4) of the Act. In these circumstances the first crediting period should be disregarded when determining the value for N , such that the value for N equals the length of the portion of the second crediting period that was reported on under the former determination.

Subsection 28(4) specifies that for transferring project areas that were originally part of an eligible offsets project that commenced before the commencement of Part 5 of the Act (13

December 2014), then the length of the crediting period is 25 years and 18 days. These projects receive an extra 18 days in their crediting period to align with the calendar year method reporting requirements of this Determination.

Examples: Crediting periods for transferring project areas

Example 1

A project is declared an eligible offset project in 2015 under the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015*. For this project the crediting period commenced in 2015. In 2025 the project proponent decides to transfer the project to this Determination, as a restarting transferring project. The section 22 application for the new project was made more than 5 years after this Determination commenced. The crediting period under this Determination is $25 - N$ years, where N equals ten, the number of years reported on under the former determination.

The proponent elected a 25 year permanence period, and first submitted an offsets report and received credits under this Determination in 2027. The permanence obligations extend for the length of the permanence period from the date that the ACCUs were first issued in relation to the sequestration offsets project. The permanence period extends for 25 years from the time the proponent was first issued with carbon credits – from 2027 until 2052 inclusive. The permanence obligations require the proponent to maintain carbon stocks until the end of the permanence period in 2052.

Example 2

A project proponent commences a savanna emissions avoidance project in 2014 under the *Carbon Credits (Carbon Farming Initiative) (Reduction of Greenhouse Gas Emissions through Early Dry Season Savanna Burning—1.1) Methodology Determination 2013*. In 2021 they decide to transfer the project from the savanna emissions avoidance determination to this Determination as a restarting transferring project, and elect a 100-year permanence period. As this project transferred less than 5 years since this Determination was made, the restarting transferring project has a 25 year crediting period. The crediting period ends 25 years after the project was declared under this Determination, extending from 2021 until 2046.

The proponent first receives carbon credits under this Determination on 21 August 2023. Their permanence period extends for 100 years from the date that the proponent was first issued with carbon credits.

Note that the start of the permanence period can be, in effect, re-set if the proponent adds new project areas at a later date.

Part 4—Net Abatement Amount

Division 1 Preliminary

29 Operation of this Part

For paragraph 106(1)(c) of the Act, this Part specifies the method for working out the net abatement amount for a reporting period for a savanna sequestration project that is an eligible offsets project.

30 Simplified outline of this Part

This section provides a simplified outline of this Part. While simplified outlines are included to assist readers to understand the substantive provisions, the outlines are not intended to be comprehensive. It is intended that readers should rely on the substantive provisions.

For this Determination carbon abatement is accounted for by estimating:

- the avoidance of emissions of greenhouse gases (methane and nitrous oxide) into the atmosphere; and
- the carbon dioxide that is removed from the atmosphere and sequestered in dead organic matter.

Savanna sequestration projects are sequestration offsets projects, and therefore subject to permanence obligations in accordance with the Act. These relate to maintaining carbon stocks for the duration of the permanence period. The Regulator has powers to require relinquishment of credits that have been issued in relation to project areas where permanence obligations have not been met and carbon stocks have declined below those for which the project has been credited. Part 7 of the Act specifies conditions when carbon credits must be relinquished.

The carbon dioxide equivalent net abatement amount for a reporting period is calculated as the sum of amounts calculated for each calendar year that ends during the reporting period. The net abatement amount in relation to a calendar year for a savanna sequestration project under this Determination is the sum of the adjusted contributions from the avoidance of emissions and from sequestration of carbon in dead organic matter for that calendar year. The calculations in this Determination are made over whole calendar years. It is not possible to calculate abatement over a period shorter than one calendar year or over a twelve-month period not beginning on 1 January.

While it is not possible to calculate abatement over less than a whole calendar year, this does not prevent or impact projects being declared eligible at any date during the year. For example, if a project was declared eligible on 1 December, then normally the crediting period starts on that date (see sections 69-70 of the Act for exceptions). Abatement calculations are made for that whole calendar year, even though the crediting period commences on 1 December, as that year is one that ends during the reporting period. This approach ensures that calculations are undertaken, and abatement calculated and credited, for the first year following the end of the baseline period, that is, that there is no 'gap' year between the baseline period and the crediting period. Abatement calculations are also made for every calendar year that ends during the crediting period. In this example, the final 11 months of the crediting period will not have any abatement calculated. Nevertheless, the project will have had 25 full years of abatement calculated and credited.

This Determination states that proponents may elect to calculate their net abatement by using SavBAT 3 or by manually undertaking the calculations contained in Schedules 1 and 2 of this Determination.

It is important to note, for project areas that span both rainfall zones that SavBAT 3 will automatically account for each part of a project area that is in a single rainfall zone, and then add the amounts for the different rainfall zones together. If a proponent chooses to undertake manual calculations, they will be required to undertake separate calculations for each project area part that is in a single rainfall zone, and then add these together to estimate abatement for the entire project area. See section 10 of Schedule 1 to the Determination and section 8 of Schedule 2 to the Determination.

If a project has more than one project area, the net abatement from emissions avoidance and from sequestration must be calculated separately for each project area. These values can then be summed across all project areas being reported on. See subsection 34(2). It is not permitted to account for negative abatement in one project area by adjusting positive abatement in another project area.

Sequestration calculations only account for sequestration in coarse and heavy fuels, whereas emissions avoidance calculations account for changes in fine, coarse, heavy and shrub fuel emissions. Sequestration calculations assume that there is no net change in carbon stored in fine and shrub fuels as a result of the project activity.

31 Use of SavBAT 3

This Determination allows project proponents to choose between completing abatement calculations and geospatial operations to inform these abatement estimates either manually, and using SavBAT 3. If SavBAT 3 is used to estimate net abatement, then it must be used in accordance with any guidelines published on the SavBAT website, which in 2018 is <https://savbat.net.au>. The offset functionality in SavBAT 3 calculates net annual abatement for each project area and each project year. Using SavBAT 3 simplifies the reporting and record-keeping requirements.

If SavBAT 3 is not used for estimating abatement, then manual calculations according to Schedule 1 and Schedule 2 must be undertaken.

33 Overview of gases accounted for in abatement calculations

Section 33 describes the emissions sources and carbon pools that need to be assessed in order to determine the total net abatement amount resulting from the project activity.

The gases that need to be taken into account when calculating abatement are:

- methane and nitrous oxide emissions from the burning of flammable vegetation (fine, coarse, and heavy fuels and shrubs) in the project area during the baseline period and the reporting period; and
- carbon dioxide from the sequestration of carbon in coarse and heavy dead organic matter.

A number of emission sources are not included in the abatement calculations.

Emissions from a number of specified sources are excluded, as these are small when compared to fire emissions. These include emissions from decomposition and degradation of living matter in the dead organic matter and soil. Emissions from existing livestock are excluded, as their numbers must not significantly increase as a consequence of the project.

Emissions from termites are also excluded. There are few Australian studies investigating the distinction between termite emissions under different fire regimes, different soils, between termite species and between geographically-distinct sites. There is generally a higher density of termites in the low-rainfall zone than in the high-rainfall zone. In addition, the densities of tree and dead organic matter biomass (fuels for fire) are lower in the low-rainfall zone than in the high-rainfall zone. As a result, potentially more methane emissions could be attributed to termites in the low rainfall zone than in the high rainfall zone. Currently it is not possible to quantify the termite methane emissions in the low-rainfall zone, and termite emissions are most likely immaterial in the high rainfall zone. Fire remains the overall dominant source of methane (likely > 90%) in both rainfall zones. A change in termite emissions as a result of the project activity is likely to be small relative to the total termite emissions. Therefore, it is reasonable to assume that the change in termite emissions that directly results from the project activity is immaterial in the high and low rainfall zones, and it is reasonable to exclude termite emissions from the greenhouse gas assessment boundary.

When calculating the net abatement amount for a calendar year, no regard is had to fossil fuel emissions arising from undertaking the project, on the basis that such emissions are not material amounts.

Division 2 Calculation of the net abatement amount

34 The net abatement amount, A

Subsection 34(1) sets out the calculation for determining the net abatement amount for a calendar year in the reporting period. It is used to calculate abatement resulting from fire management for both emissions avoidance and sequestration of carbon in dead organic matter. The net abatement amount, A , for a reporting period is the sum of the adjusted net abatement from emissions avoidance and the adjusted net abatement from sequestration in each project area and each full calendar year that ends in the reporting period.

Adjustments to calculations—multiple project areas

Subsection 34(2) sets out how the net abatement amount is calculated for a project with more than one project area. The provision states that proponents must calculate the value of A for each project area and then add the values together in order to determine the total net abatement amount for the project.

As a result of subsection 34(2), adjusted abatement for each project area must be calculated in accordance with Schedules 1 and 2. Adjusted abatement can be a positive or zero value. Negative values are carried forward for each project area or project area part as $B_{U,y}$ and

$\Delta C_{Seq,Prev}$, and these values are required for calculation of the following year's adjusted abatement. The adjusted abatement for each project area is summed in accordance with equation 1.

Example: Adjustments to calculations—multiple project areas

Example

A project has two project areas: 'AREA 1' and 'AREA 2'. The net adjusted abatement amount for AREA 1 is calculated to be 1000 tonnes of CO₂-e. The net adjusted abatement amount for AREA 2 is calculated to be 500 tonnes of CO₂-e.

The net adjusted abatement amount for this project, is the sum of the net adjusted abatement amount for each project area. In this case: Net Adjusted Abatement (total for the project) = Adjusted Abatement [AREA 1] + Adjusted Abatement [AREA 2] = (1000) + (500) = 1500 tonnes of CO₂-e. This means that 1500 Australian carbon credit units can be issued in relation to this whole project for this offsets report.

Documents on which calculations are based

Subsection 34(3) specifies that, in accordance with paragraph 7(3)(a), if a later version of either or both of the Savanna Fire Management LDS Start Date spatial data layer and the Savanna Fire Management LDS End Date spatial data layer are applicable for the calendar year being reported on, then these special data layers must also be used to calculate the baseline values used to estimate abatement.

Examples: Using the correct versions of LDS spatial data layers for reporting.

Example 1

The Department updated the LDS Start Date and the LDS End Date spatial data layers, and these were published on the Department's website on the 15 August 2020 (i.e. *after* 1 July).

In 2024, a project proponent prepared the offset report covering the years 2019, 2020, 2021, 2022 and 2023. The abatement must be calculated separately for each of these calendar years.

When estimating abatement for the calendar years 2022 and 2023, the new LDS Start Date and the LDS End Date spatial data layers must be used to estimate project and baseline values used to estimate abatement. Abatement estimates for earlier years must use the former LDS Start Date and the LDS End Date spatial data layers.

SavBAT 3 will automatically use the correct LDS Start Date and the LDS End Date spatial data layers applicable for each calendar year.

Example 2

The Department updated the LDS Start Date and the LDS End Date spatial data layers, and these were published on the Department's website on the 1 April 2020 (i.e. *before* 1 July).

In 2024, a project proponent prepared the offset report covering the years 2019, 2020, 2021, 2022 and 2023. The abatement must be calculated separately for each of these calendar years.

When estimating abatement for the calendar years 2021, 2022 and 2023, the new LDS Start Date and the LDS End Date spatial data layers must be used to estimate project and baseline values used to estimate abatement. Abatement estimates for earlier years must use the former LDS Start Date and the LDS End Date spatial data layers.

SavBAT 3 will automatically use the correct LDS Start Date and the LDS End Date spatial data layers applicable for each calendar year.

Part 5 – Reporting, record-keeping and monitoring requirements

Division 1 Offsets report requirements

35 Operation of this Division

Subsection 106(3) of the Act provides that a methodology determination may require the project proponent of a savanna sequestration project that is an eligible offsets project to comply with specified reporting, record-keeping and monitoring requirements.

Under Parts 17 and 21 of the Act, a failure to comply with these requirements may constitute a breach of a civil penalty provision, and a financial penalty may be payable.

The reporting and monitoring requirements specified in Part 5 of this Determination are in addition to any requirements specified in the Act and the Rule.

Two record-keeping requirements are specified in this Determination. Project proponents will also have to comply with the record-keeping requirements set out in the Rule.

Paragraph 106(3)(a) of the Act provides that a methodology determination may require project proponents to include specified information relating to the project in each offsets report about the project. Other reporting requirements are set out in the Rule.

36 Information that must be included in offsets reports

Subsection 36(1) lists items that must be provided to the Regulator with each offsets report, for each project area to which the report relates.

Paragraph 36(1)(a) provides that the project proponent must supply with each offsets report a statement that all project areas being reported on did not vary during the reporting period other than in accordance with section 15. Section 15 of this Determination specifies, among other things, how project areas can be subdivided.

If a project area was added to the project during the reporting period, then the project proponent must provide a statement to this effect (paragraph 36(1)(b)).

Paragraph 36(1)(c) specifies that if there are any project areas that are being reported on, and this is the first time they are being reported on as a subdivided project area in accordance with section 15 of this Determination, then the offsets report must contain a statement to this effect that includes the date on which the relevant variation of the section 27 declaration took effect.

Paragraph 36(1)(d) provides that the proponent must also submit, along with their offsets report, a copy of each report produced by SavBAT 3 for each project area being reported on and each project year that ends during the reporting period, if the proponent used SavBAT 3 to calculate the net abatement amount. For example, if the reporting period includes the calendar year 2019, and a project area is reported on that was not reported in 2018 but was reported on in 2017, both the 2018 and 2019 SavBAT 3 reports must be provided for that project area.

Subparagraph 36(1)(d)(ii) also provides that if the project was subdivided in a reporting year, then the SavBAT 3 subdivision report must also be provided in the offset report.

Paragraph 36(1)(e) only applies when the project proponent calculated the net abatement amount without using SavBAT 3. In this situation, the requirement is that the proponent include in their offsets report, for each project area where SavBAT 3 has not been used, copies of each seasonal fire map prepared in accordance with the savanna technical guidance document. Where relevant, the project proponent must also include in their offsets report any ERF audit report relating to the validation of the seasonal fire map for which that monthly fire map was used. The project proponent must include the value of each amount that was calculated in accordance with each equation set out in Schedules 1 and 2 that was used for the purpose of calculating the net abatement amount.

Finally, subparagraph 36(1)(e)(iv) provides for the situation where the project area is a subdivided project area that is first reported on during the reporting period. In this case, the project proponent must include the values calculated in accordance with equation 13, equation 18 and equation 19, and (in contrast to the requirement of subparagraph 36(1)(e)(iii)) the values of the variables that were used to calculate those values. These equations deal with adjustments resulting from subdivided project areas.

Paragraph 36(1)(f) requires the proponent to include along with their offsets report the results of the monitoring, if the project proponent is required to monitor one or more project areas in accordance with section 40 of this Determination.

Paragraph 36(1)(g) provides that when the project proponent is not required to monitor the project area in accordance with section 40, they must provide a statement that the project area, to their best of their knowledge, does not contain any relevant weed species.

Paragraph 36(1)(h) provides that the proponent must also include with their offsets report a declaration stating that the densities of livestock in the project area have not increased as a result of the project. The project proponent must not increase cattle grazing, beyond that which would have normally occurred in the absence of the project. The project cannot be one

in which stocking densities are deliberately increased in or adjacent to the project for the primary purpose of reducing fuel loads and hence fire activity.

Paragraph 36(1)(i) requires, when subsection 14(4) or paragraph 25(4)(b) applies, the proponent to provide a map of the area which contained the relevant weed species along with evidence that the weeds have been permanently removed from that area.

Subsection 36(2) provides that, for subparagraph (1)(e)(i), a single map may show the area burnt in both fire seasons in a calendar year if each fire season is uniquely identified.

Subsection 36(3) provides that the offsets report must include information about the planned fire management in each project area and for each calendar year that is being reported on.

Subparagraph 36(3)(a)(i) specifies that the offsets report must contain a statement as to whether planned burning was undertaken in each project area and for each calendar year that is being reported on. Subparagraph 36(3)(a)(ii) specifies that the statement must include a description of the location, timing and extent of the planned burning undertaken in each project area. This includes the location and timing of burning activities each year that occur in the early dry season, and those that also occur in the late dry season if these were undertaken. Subparagraph 36(3)(a)(iii) specifies that the offsets report must provide an indication, for each project area and each calendar year, whether, and the extent to which, the planned burning satisfies section 16. The intent is that the project proponent demonstrates to the Regulator that their planned burning met the objectives of paragraph 11(1)(a) of this Determination.

Paragraph 36(3)(b) provides that if planned burning was not undertaken, then a statement must be included in the offsets report that provides the reasons why the planned burning was not undertaken. Subsection 16(3) of this Determination allows proponents to provide a reason why planned burning may not have been undertaken. Provided the failure to undertake planned burning resulted from circumstances beyond the project proponent's control, the project will not become ineligible.

Paragraph 36(3)(c) provides that (i) a copy of the project management plan prepared in accordance with section 17 of this Determination for each project area and each calendar year being reported on must be provided with the offsets report. The offsets report must also include (ii) revisions or updates to the project management plan if it was revised or updated during the year. If the project proponent already completes another annual plan, such as a fire management plan, that is completed before the commencement of the fire season and describes the intended fire management activities in accordance with section 17, then this can be considered as a project management plan, and a copy of the relevant sections can be included in the offsets report.

Paragraph 36(3)(d) specifies that the project proponent must provide with the offsets report, the 10-year project equilibrium fuel load. This is provided in the SavBAT abatement report, but would need to be calculated for project proponents electing to use manual calculations. The 10-year project equilibrium is calculated in accordance with section 7 of Schedule 2 over the 'relevant calculation period' referred to in section 5 of this Determination.

Subsection 36(4) specifies that if a proponent was required or elected to create or revise a vegetation fuel type map under Division 4 of Part 3, the proponent must include in their offsets report the following things:

- A statement that a map was created or revised during the reporting period, including when this was done and for which project area or project areas – paragraph 34(4)(a) and paragraph 34(4)(b).
- For each map that was created or revised, the proponent must include in the next offsets report after the map was created or revised;
 - a copy of the map that was created or revised and validated (if required) in accordance with the provisions in Division 4 of Part 3 and the requirements set out in the savanna technical guidance document – subparagraph 34(4)(c)(i);
 - if the map was created, then a map that shows the boundaries of the rainfall zones referred to in section 6 in relation to the created vegetation map – subparagraph 34(4)(c)(ii);
 - if the map was revised, a statement explaining the reasons why the map required revision – subparagraph 34(4)(c)(iii);
 - the ERF audit report, as applicable, relating to the creation and validation of the vegetation fuel type map.

Subsection 36(5) specifies that if any project areas, including subdivided project areas, were removed during the reporting period, as a result of subparagraph 14(2)(b)(i) or (ii), then the offsets report must include a statement to this effect that includes the calculation of the portion of the cumulative net abatement amount that is attributed to the removed area. This amount is calculated in accordance with section 11 of Schedule 2 up to the end of the year before the project area was removed.

Subsection 36(6) specifies that the offset report must provide a description of the version of an instrument or writing that was in force at the end of the reporting period for each abatement calculation, and include the start and end dates of each use. If it was not possible to use the version that was in force at the end of the reporting period, the offsets report must provide a statement as to the reasons why the correct version was not used. The proponent is required to detail in their offsets report:

- the versions of the instrument or writing that was used;
- the start and end dates for each use; and
- why it was not possible for the proponent to use the version that was in force at the end of the reporting period.

Subsection 36(7) sets out that references in this Determination to an ERF audit report has the same meaning as in the *National Greenhouse and Energy Reporting Act 2007*.

Division 2 Record-keeping requirements

37 Operation of this Division

Section 37 provides that this Division sets out record-keeping requirements for eligible offsets projects under this Determination, in accordance with paragraph 106(3)(c) of the Act. A note specifies that other record-keeping requirements are set out in the Rule.

38 Record-keeping requirements

Subsection 38(1) sets out two record-keeping requirements applicable if a project proponent used SavBAT 3 to calculate the net abatement amount.

Paragraph 38(1)(a) specifies that the project proponent must keep records of each SavBAT 3 record-keeping report.

Paragraph 38(1)(b) specifies that the project proponent must keep a record of all data files that were used when calculating the net abatement amount.

Subsection 38(2) specifies that if SavBAT 3 was not used to estimate net abatement, then the project proponent must retain records of all calculations that were undertaken in order to calculate that amount.

Division 3 Monitoring requirements

39 Operation of this Division

Section 39 provides that this Division sets out monitoring requirements for eligible offsets projects under this Determination, in accordance with paragraph 106(3)(d) of the Act. A note specifies that other monitoring requirements are set out in the Rule.

40 Monitoring requirements

Section 40 specifies monitoring requirements regarding steps taken for the detection of weeds in project areas. A table sets out instructions for the monitoring requirements with which a project proponent must comply when carrying out a project under this Determination. There is a requirement that project proponents must monitor for relevant weed species as defined in the savanna technical guidance document.

For the purposes of this Determination, relevant weed species are weeds which, where present, are known to result in more severe fire behaviour compared to the fire behaviour in any of the vegetation fuel types for which abatement calculations are made in this Determination. For example, where relevant weed species are present, fires are likely to burn at greater intensities than in areas where there is an absence of relevant weed species. This results in more greenhouse gases being emitted to the atmosphere and less carbon being sequestered in dead organic matter for fires in areas where relevant weed species are present compared to from fires in areas where relevant weed species are absent. Currently, it is not

possible to quantify the increase in greenhouse gas emissions and impacts on sequestered carbon resulting from fires occurring under different conditions and in different fire seasons in areas containing relevant weed species. Consequently, as it is known that the calculations in this Determination will over-estimate the avoided emissions and the increase in carbon sequestered in dead organic matter in areas containing relevant weed species, it is appropriate to remove these areas from the project.

Paragraph 14(2)(b) specifies a requirement that project areas cannot include an area of land that contains a relevant weed species. Section 15 specifies how project areas can be subdivided, and this process can be used to remove areas containing relevant weed species from the project; to ensure the project remains an eligible offset project under this Determination.

Section 40 specifies how monitoring for relevant weed species must occur as detailed in the savanna technical guidance document. The frequency of monitoring must be consistent with either the requirements in the savanna technical guidance document or in accordance with the ***Relevant Weeds Risk spatial data layer***, if available. Publication of a Relevant Weeds Risk spatial data layer is not a requirement under the Act or this Determination. If a Relevant Weeds Risk spatial data layer is not published, refer to the savanna technical guidance document for guidance on monitoring.

These monitoring requirements are only applicable if the savanna technical guidance document provides the relevant instructions on how to monitor for relevant weed species.

Part 6 - Partial reporting

41 Partial reporting

The effect of subsection 77A(1) of the Act is that project proponents may divide a project into two or more parts and report on those parts as if they were projects in their own right. Each of these parts can be reported on separately. For example, a proponent of a project under this Determination may choose to divide the project due to aggregation, partial reporting or for business or other reasons.

Subsection 77A(2) of the Act provides that the division of the overall project must comply with such requirements (if any) as are set out in the applicable methodology determination for the overall project. The effect of section 77A of the Act is that, if an overall project is divided in this manner, the project proponent is to give to the Regulator, among other things, offsets reports for the period for which the project is divided, as if each part into which the project has been divided were an eligible offsets project in its own right. An offsets report is not required for the entire, undivided project. Section 77A of the Act does not otherwise impact on when offsets reports are required.

Schedule 1—Emissions avoidance—calculation of adjusted contribution to net abatement amount for a calendar year

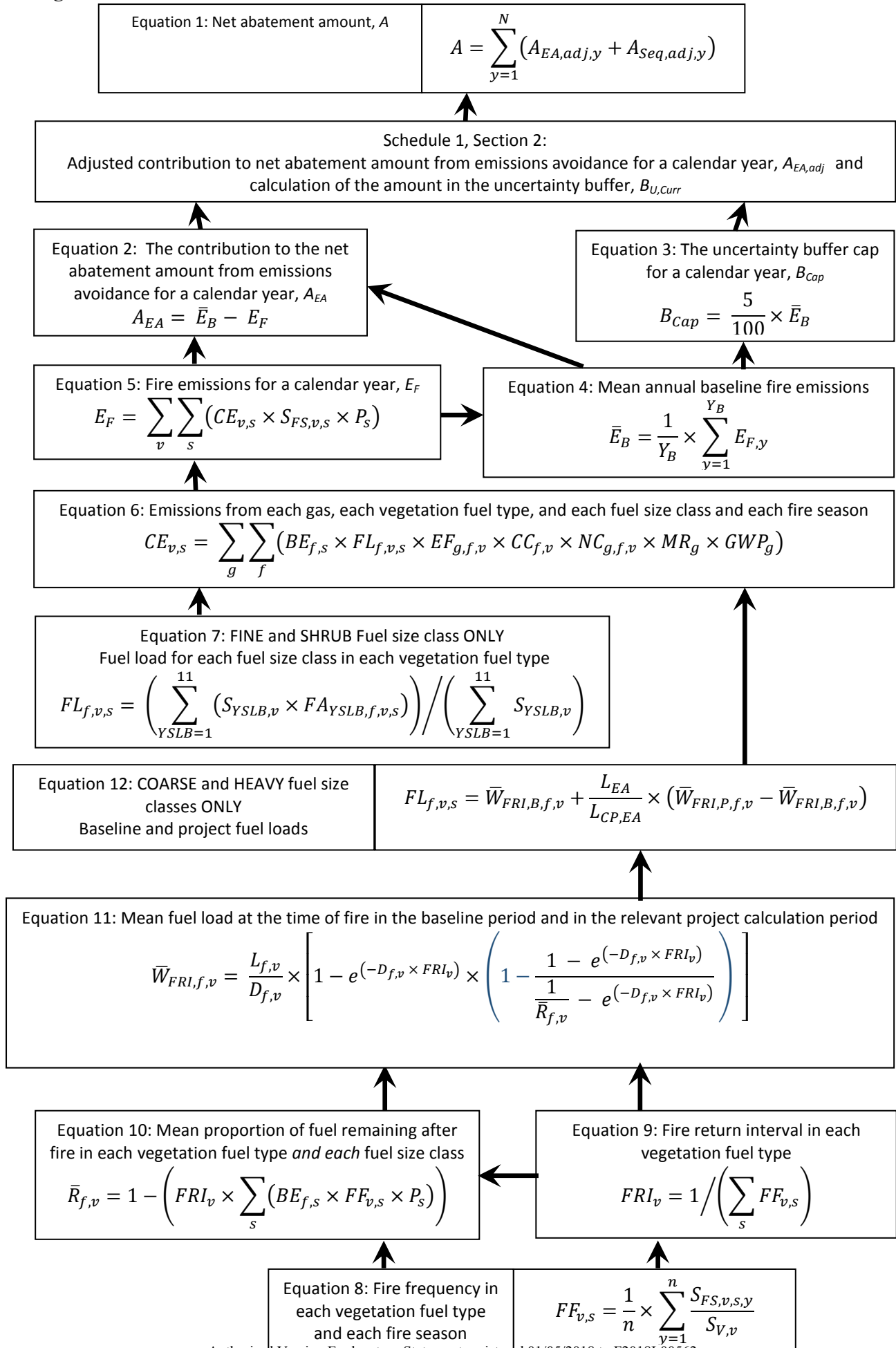
Division 1 Preliminary

1 Simplified outline of this Schedule

This section provides a simplified outline of this Schedule. While simplified outlines are included to assist readers to understand the substantive provisions, the outlines are not intended to be comprehensive. It is intended that readers should rely on the substantive provisions.

This section provides a simple outline of how the adjusted contribution to the net abatement amount for the project area from the avoidance of emissions for a calendar year, $A_{EA,adj}$, is calculated manually. Figure 2 provides a flow chart of the calculations for calculating the adjusted contribution to net abatement amount from avoided emissions. These steps must be followed if the project proponent elects to complete calculations without using SavBAT 3. For project proponents electing to complete abatement estimations using SavBAT 3, these steps are included in the functionality of SavBAT 3.

Figure 2. Emissions avoidance calculations flow chart



Division 2 Calculations

2 Calculation of adjusted contribution to net abatement amount from emissions avoidance for a calendar year, $A_{EA,adj}$

The value of the adjusted contribution to net abatement, $A_{EA,adj}$, is calculated in accordance with the conditions set out in the table in this section of Schedule 1. The adjusted contribution to the net abatement is calculated in accordance with this section for each calendar year reported on in the permanence period. Net annual abatement is adjusted to manage inter-annual variability in avoided emissions and the risk of the project containing some year(s) with emissions that are higher than the baseline mean annual emissions. Adjusting the net annual abatement in each project area reduces the risk of over-crediting of projects.

An uncertainty buffer ($B_{U,Curr}$) is calculated at the end of each calendar year for each project area or project area part where project areas span both rainfall zones. At the beginning of the project, except for transferring projects that have already submitted an offsets report under the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015* or the *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Emissions Avoidance) Methodology Determination 2018* or this Determination, the value of the uncertainty buffer is zero. Transferring projects bring with them the existing uncertainty buffer for each project area or project area part that has been transferred to this Determination.

The uncertainty buffer is capped at a threshold amount defined as 5% of the mean annual baseline emissions. Projects which continuously perform well are not penalised, as they are able to meet the threshold for the uncertainty buffer cap within the first few project years.

The adjustment applied to net annual project abatement in the table in section 2 considers: (1) whether the value in the uncertainty buffer at the end of the previous calendar year ($B_{U,Prev}$) was more or less than zero; (2) whether or not the capped uncertainty buffer value has been achieved; and (3) whether net annual project abatement is greater or less than zero.

When the value of the uncertainty buffer at the end of the previous calendar year was greater than, or equal to, zero but less than the capped value, and net annual abatement is greater than zero, then a contribution from net abatement is made to the uncertainty buffer. This contribution is a maximum of 10% of the total net annual abatement from emissions avoidance, such that the amount in the uncertainty buffer does not exceed the uncertainty buffer cap value.

If the contribution to the net abatement amount from emissions avoidance for any calendar year in the crediting period is a negative amount, the adjusted contribution to the net abatement amount from avoided emissions for the calendar year is taken to be zero. This net negative abatement is accounted for by the amount in the uncertainty buffer. If a negative amount remains in the uncertainty buffer, this is accounted for in subsequent calendar year(s) before further credits are issued.

An exception to this occurs when the sum of the net abatement amount from emissions avoidance and the amount in the uncertainty buffer from the previous year sum to a value greater than the value for the uncertainty buffer cap. In this case, the adjusted net abatement amount from emissions is the sum of the net abatement amount and the uncertainty buffer from the previous year, less the value for the uncertainty buffer cap.

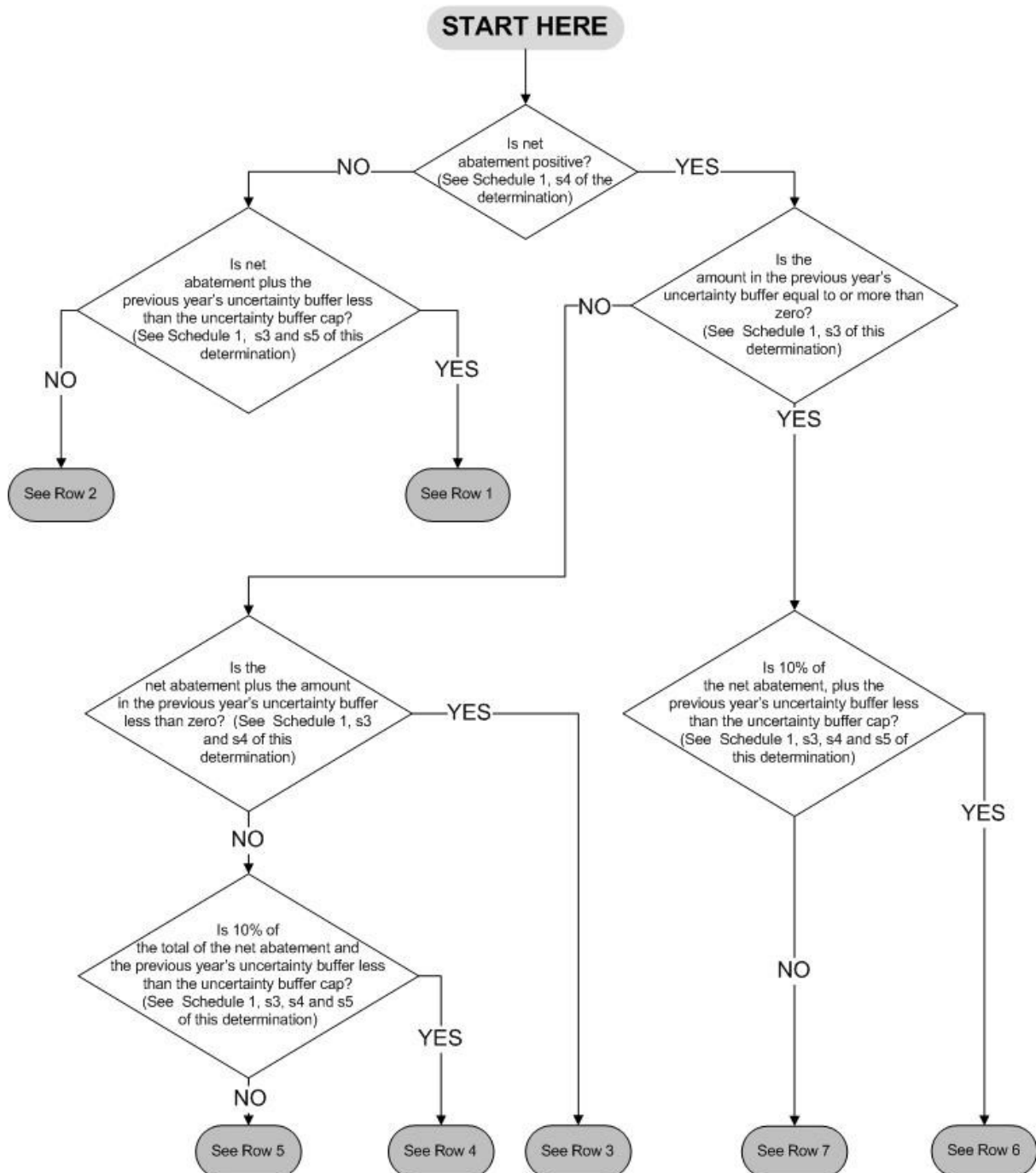
Calculation of adjusted contribution to net abatement amount from emissions avoidance

The examples and flow diagrams describe how the table in Section 2 of Schedule 1 calculates the adjusted contribution to net abatement and the value of the current year's uncertainty buffer. All possible scenarios are summarised in the decision tree and the examples below, and adhere to the rules stipulated in the table in section 2.

Calculation of adjusted contribution to net abatement amount from emissions avoidance

Scenario: A project proponent would like to know how to calculate: (a) the adjusted contribution to net abatement amount from emissions avoidance for a project; and (b) the uncertainty buffer for the project area for the current year.

Row numbers refer to the rows in the table in Schedule 1, s2 of this determination



Examples: Uncertainty buffer

Each example corresponds to a row in the table in section 2 of Schedule 1.

For all examples the uncertainty buffer cap is equal to 4,500 t CO₂-e.

Example 1 – Row 1 of table

The net abatement from emissions avoidance this calendar year is -300 t CO₂-e and the value of the uncertainty buffer at the end of the previous calendar year was 4,000 t CO₂-e. Row 1 of the table applies because the sum of these amounts (3,700 t CO₂-e) is less than the uncertainty buffer cap (4,500 t CO₂-e). Using the right hand columns of the table, the adjusted net annual abatement is zero and the value of the uncertainty buffer at the end of this calendar year is 3,700 t CO₂-e.

Example 2 – Row 2 of table

The project area being reported on has transferred from the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015*, and brought with it from the previous year an uncertainty buffer of 6,000 t CO₂-e. The net abatement from emissions avoidance this calendar year is -300 t CO₂-e. Row 2 of the table applies because the condition has been met: that is, the sum of these amounts (5,700 t CO₂-e) is greater than the uncertainty buffer cap (4,500 t CO₂-e).

The adjusted net annual abatement is the sum of the net abatement for the year plus the previous year's uncertainty buffer, minus the uncertainty buffer cap. That is: $(-300) + (6,000) - (4,500) = 1,200$ t CO₂-e.

The value of the uncertainty buffer takes on the value of the uncertainty buffer cap (4,500 t CO₂-e).

This example results in an adjusted contribution to the net abatement amount from emissions avoidance which is positive, even though the actual net abatement for the project for the calendar year was negative.

Example 3 – Row 3 of table

The net abatement from emissions avoidance is 500 t CO₂-e and the value of the uncertainty buffer at the end of the previous calendar year was -800 t CO₂-e. Row 3 of the table applies because the condition has been met: that is, the sum of these amounts (-300 t CO₂-e) is less than zero.

The adjusted net annual abatement is 0 t CO₂-e.

The value of the uncertainty buffer takes on the value of the sum of the net abatement and the value of the previous year's uncertainty buffer: $(-800) + (500) = -300$ t CO₂-e.

In subsequent years, the uncertainty buffer must become positive before the adjusted contribution to the net abatement from emissions avoidance for the project area for the project year will be positive.

Example 4 – Row 4 of table

The net abatement is 20,000 t CO₂-e. The value of the previous year's uncertainty buffer is -1000 t CO₂-e. Row 4 of the table applies because two conditions have been met. Firstly, these two values sum to a positive number, 19,000 t CO₂-e. Secondly, 10% of the summed value (1,900 t CO₂-e) is less than the uncertainty buffer cap (4,500 t CO₂-e).

Therefore, the adjusted contribution to the net abatement from emissions avoidance is 90% of the sum of the net abatement and the value of the previous year's uncertainty buffer. That is: $0.9 \times (20,000 - 1000) = 17,100$ t CO₂-e.

The uncertainty buffer for the current year is equal to 10% of the sum of the net abatement and the value of the previous year's uncertainty buffer. That is: $0.1 \times (20,000 - 1000) = 1,900$ t CO₂-e.

Example 5 – Row 5 of table

The net abatement is 65,000 t CO₂-e. The value of the previous year's uncertainty buffer is negative at -1,000 t CO₂-e. Row 5 of the table applies because, two conditions have been met. Firstly, these two values sum to a positive number, 64,000 t CO₂-e. Secondly, 10% of the summed value (6,400 t CO₂-e) is greater than the uncertainty buffer cap (4,500 t CO₂-e).

Therefore, the adjusted contribution to the net abatement from emissions avoidance is the net abatement plus the value of the uncertainty buffer for the previous year, less the value of the uncertainty buffer cap. That is, $65,000 + (-1000) - 4,500 = 59,500$ t CO₂-e.

The value of the uncertainty buffer for the current year is equal to the value of the uncertainty buffer cap (4,500 t CO₂-e).

Example 6 – Row 6 of table

The net abatement is 20,000 t CO₂-e. The value of the previous year's uncertainty buffer is 2,000 t CO₂-e. Row 6 of the table applies because the condition has been met: that is, the sum of 10% of the net abatement and the value of the previous year's uncertainty buffer is less than the uncertainty buffer cap (4,500 t CO₂-e). That is: $2,000 + 2,000 = 4,000$.

Therefore, the adjusted contribution to the net abatement from emissions avoidance is 90% of the net abatement. That is: $0.9 \times 20,000 \text{ t CO}_2\text{-e} = 18,000 \text{ t CO}_2\text{-e}$.

The value of the uncertainty buffer for the current year is equal to 10% of the net abatement added to the previous year's uncertainty buffer. That is: $2,000 + 2,000 = 4,000 \text{ t CO}_2\text{-e}$.

Example 7 – Row 7 of table

The net abatement is 65,000 t CO₂-e. The value of the previous year's uncertainty buffer is positive at 1,000 t CO₂-e. Row 7 of the table applies because the condition has been met: that is, the sum of 10% of the net abatement and the value of the previous year's uncertainty buffer is greater than the uncertainty buffer cap (4,500 t CO₂-e). That is: $6,500 + 1,000 = 7,500$.

Therefore, the adjusted contribution to the net abatement from emissions avoidance is the net abatement plus the value of the uncertainty buffer for the previous year, less the value of the uncertainty buffer cap. That is, $65,000 + 1000 - 4,500 = 61,500 \text{ t CO}_2\text{-e}$.

The value of the uncertainty buffer for the current year is equal to the value of the uncertainty buffer cap (4,500 t CO₂-e).

3 The previous year's uncertainty buffer, $B_{U,Prev}$

Section 3 of Schedule 1 defines the value of the uncertainty buffer for the previous year, $B_{U,Prev}$.

If this is the first calendar year of the project, or the uncertainty buffer was not calculated under a former determination, including the *Carbon Farming (Reduction of Greenhouse Gas Emissions through Early Dry Season Savanna Burning) Methodology Determination 2012*; or the *Carbon Credits (Carbon Farming Initiative) (Reduction of Greenhouse Gas Emissions through Early Dry Season Savanna Burning—1.1) Methodology Determination 2013*; then the value for $B_{U,Prev}$ is zero.

Subsection 3(2) specifies that if the project had been reported on for that year, the relevant value for the purposes of paragraph 3(1)(a) is the value reported in the offsets report. However, paragraph 3(1)(a) of Schedule 1 can be modified in some cases in line with paragraph 21(2)(c) of this Determination. That is, if the requirement in lieu of the newness requirement set out in paragraph 21(2)(c) of this Determination is met, then disregard any value for the uncertainty buffer that might have been calculated for the project area referred to in paragraph 21(2)(c) of this Determination, in accordance with subparagraph 21(3)(d)(i) of this Determination. As a result, for projects affected by this provision, the value for the uncertainty buffer $B_{U,Prev}$ in the first calendar year under this Determination is taken to be

equal to zero. This applies in the situation where a project had been undertaken in the project area or part of the project area, but no Australian carbon credit units have been issued in relation to any part of the project area while the project area was covered by any such methodology determination.

Section 3 is expressed as being subject to section 12 of Schedule 1, which provides for how to calculate the previous year's uncertainty buffer when a project area is divided into subdivided project areas.

4 The contribution to the net abatement amount from emissions avoidance for a calendar year, A_{EA}

Section 4 provides a definition of A_{EA} , and sets out equation 2 used to determine the contribution to the net abatement amount in tonnes CO₂-e from the avoidance of emissions for a calendar year. The contribution to the net abatement amount from the avoidance of emissions for a calendar year is the difference between the mean annual baseline fire emissions and the annual project emissions for that calendar year. A_{EA} is used in section 2 of Schedule 1 to calculate the amount $A_{EA,adj}$.

5 The uncertainty buffer cap for a calendar year, $B_{U,Cap}$

Section 5 of Schedule 1 sets out equation 3 used to calculate the value of the uncertainty buffer cap, being 5% of the mean annual baseline fire emissions. The uncertainty buffer cap must be calculated for each calendar year being reported on, as the value may change if there are updates to input parameters used to calculate the mean annual baseline fire emissions. $B_{U,Cap}$ is used in section 2 of Schedule 1 to calculate the amount $A_{EA,adj}$.

6 Mean annual baseline fire emissions

Section 6 provides that mean annual baseline fire emissions are calculated using equation 4 for project areas or project area parts in the low-rainfall or high-rainfall zones. Y_B will vary in the equation depending on whether the project area (or project area part) is in the low rainfall or the high rainfall zones, to reflect the number of years in the baseline period (15 years and 10 years respectively). The mean annual baseline fire emissions must be recalculated each calendar year as the value may change if there are updates to input parameters.

7 Fire emissions for a calendar year, E_F

Section 7 sets out the equation used to determine the value of E_F for the purposes of defining E_F in section 4 and $E_{F,y}$ in section 6 of this Schedule of this Determination. Fire emissions are calculated using equation 5 for each calendar year in the baseline period and each calendar year reported on in the crediting period.

Fire emissions are calculated for each project area by multiplying the emissions per hectare by the burnt area of the project area or project area part, and the patchiness in either the early or late dry season, and summing these across fire seasons and all vegetation fuel types. Values for patchiness are provided in the National Inventory Report and duplicated in the savanna technical guidance document. Patchiness is defined as the proportion of a fire scar area that is burnt in a fire and is different for the two fire seasons.

Subsection 7(2) sets out the equation used to determine the carbon emissions of a fire that burns a hectare of vegetation of a particular vegetation fuel type in a particular fire season. Equation 6 calculates the carbon emissions for each vegetation fuel type and each fire season by taking into account:

- the burning efficiency, which is the proportion of combusted fuel that is volatilised in a fire, for each fire season and each fuel size class set out in the National Inventory Report and duplicated in the savanna technical guidance document;
- the fuel load for fine and shrub fuel size classes is determined from section 8 of Schedule 1. The fuel load for coarse and heavy fuel size classes is determined from section 9 of Schedule 1.
- the emissions factor for each vegetation fuel type, fuel size class and greenhouse gas set out in the National Inventory Report and duplicated in the savanna technical guidance document;
- the nitrogen to carbon ratio for each vegetation fuel type, fuel size class and greenhouse gas set out in the National Inventory Report and duplicated in the savanna technical guidance document. For calculations of methane emissions, the nitrogen to carbon ratio is 1. For calculations of nitrous oxide emissions, the value of the nitrogen to carbon ratio is defined in the National Inventory Report and duplicated in the savanna technical guidance document;
- the carbon content for each fuel size class and vegetation fuel type set out in the National Inventory Report and duplicated in the savanna technical guidance document; and
- the ratio of molecular mass and
- the global warming potential for each greenhouse gas. The global warming potential of methane and nitrous oxide must be taken from the *National Greenhouse and Energy Reporting Regulations 2008*, as in force at the end of the reporting period for the relevant project area.

The relevant fuel types, *f*, for calculations under this Division are fine fuels, coarse fuels, heavy fuels, and shrub fuels.

8 Fuel loads—shrub fuel and fine fuel

Subsection 8(1) explains that this section sets out the requirements for the calculation used to determine the fuel load for shrub and fine fuel size classes for the definition of $FL_{f,v,s}$ used in equation 6 and in accordance with subsection (2).

Paragraph 8(2)(a) specifies that a years-since-last-burnt (YSLB) map for the calendar year that covers the project area must be developed in accordance with the savanna technical guidance document.

Paragraph 8(2)(b) specifies that for the calendar year, the years-since-last-burnt (YSLB) map is used to determine the area burnt, $S_{YSLB,v}$ in each year since last burnt and each vegetation fuel type. The area burnt is determined by comparing the YSLB map for the year with the vegetation fuel type map so that the area burnt in each vegetation fuel type for each YSLB class from years 1 to 11 since last burnt can be determined.

Paragraph 8(2)(c) specifies that the areas burnt calculated in accordance with paragraph 8(2)(b) must be used to determine the fuel load for each fuel size class and each vegetation fuel type in the project area in accordance with equation 7.

For subsection 8(3) sets out the equation 7 to calculate the fuel load for the project area, in tonnes of biomass per hectare, of fuel size class f (shrub and fine fuel size classes only) of vegetation fuel type v for fire season s of the calendar year— $FL_{f,v,s}$ —for use in Equation 6. The values for fuel accumulation values for ‘Years Since Last Burnt’ for shrub and fine fuel size classes, $FA_{YSLB,f,v,s}$, in equation 7 are contained within the savanna technical guidance document.

9 Fuel loads—coarse fuel and heavy fuel

Section 9 sets out the calculations for estimating fuel loads for coarse and heavy fuel size classes for the definition of $FL_{f,v,s}$ for subsection 7(2) of Schedule 1 of this Determination. These calculations are also used in section 7 of Schedule 2 of this Determination for estimating equilibrium baseline and project fuel loads for the purpose of estimating sequestration abatement.

When undertaking calculations for the purposes of section 9 of Schedule 1 and section 7 of Schedule 2, this process will result in the calculation of one set of values of $FF_{v,s}$, FRI_v , $\bar{R}_{v,f}$ and $\bar{C}_{Seq,B,E,f,v}$ for the baseline period, and another set of values of $FF_{v,s}$, FRI_v , $\bar{R}_{v,f}$ and $\bar{C}_{Seq,P,E,f,v}$ for the calendar year being reported on.

Equation 8 is used to calculate the fire frequency for each vegetation fuel type in each fire season for both the baseline and project calculation periods. For each vegetation fuel type and fire season, the fire frequency is determined by dividing the total area burnt in a fire season by the total area of the vegetation fuel type in the project area, summing these for each of the years in the relevant calculation period, and then dividing by the number of years in the relevant calculation period. The relevant calculation period is defined in section 5 of this Determination.

Equation 9 is used to determine the mean fire return interval for each vegetation fuel type, in years, for each of the relevant calculation periods. This is determined as the inverse of the sum of the fire frequencies for that vegetation fuel type in both the early and late dry seasons.

Equation 10 is used to determine the mean proportion of dead organic matter of each vegetation fuel type, for a particular fuel size class, that remains after a fire. This is determined for each fuel size class in each vegetation fuel type as a function of the fire return interval, the burning efficiency and patchiness (from the National Inventory Report) and the fire frequency (from equation 8). Patchiness defines the proportion of a fire scar area that is burnt in a fire and is different for the two fire seasons and rainfall zones.

Equation 11 is used to calculate the mean fuel load at the time of fire in dead organic matter as determined from the mean fire return interval. These calculations are performed for each vegetation fuel type and fuel size class for the baseline period ($\bar{W}_{FRI,B,f,v}$) and the project calculation period ($\bar{W}_{FRI,P,f,v}$). The relevant calculation period for the project is defined in section 5 of this Determination.

Equation 12 is used to calculate the coarse and heavy fuel loads used for the calculation of carbon emissions in equation 6 in subsection 7(2) of Schedule 1 to this Determination.

Coarse and heavy fuel loads used to estimate emissions for each calendar year are determined by calculating the mean amount of fuel that is present at the time fires occur as a result of the project under either this Determination or the *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Emissions Avoidance) Methodology Determination 2018*, and adding this to the mean baseline fuel load when fires occur. The incremental increase in fuel load is a proportion of the difference between the mean project and baseline fuel loads. The proportion is determined by the number of years the project has reported under either this Determination or the *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management—Emissions Avoidance) Methodology Determination 2018* (L_{EA}) divided by the length of the crediting period minus the number of years the project reported on under any savanna determination other than this Determination for a continuing transferring project ($L_{CP,EA}$). L_{EA} is limited by the value for $L_{CP,EA}$ to demonstrate when the project equilibrium has been reached.

Coarse and heavy fuel loads for the baseline period are equal to the mean fuel load during the baseline period at the time when fires occur. For these calculations L_{EA} is equal to zero, confirming that there has been no fuel accumulation resulting from the project activity.

Coarse and heavy fuel loads for the project period are equal to the mean fuel load at the time fires occur during the baseline period plus the biomass that has accumulated since the start of the project. For these calculations, the fuel load at the time of fire reflects the accumulation of fuel since the commencement of the project.

Values for baseline and project mean fuel loads are calculated for each calendar year. Mean fuel loads can change as a result of updates in the National Inventory Report or if the vegetation fuel type map or fire season spatial data layer are updated.

Division 3 —Adjustments to calculations

10 Adjustments resulting from project area spanning rainfall zones

Section 10 specifies that if the project area spans both rainfall zones, then the adjusted contribution to the net abatement amount from emissions avoidance, $A_{EA,adj}$, must be calculated separately for each project area part, and then these values are summed to determine the adjusted contribution to the net abatement amount from emissions avoidance for the whole project area. As a result, any positive or negative amounts to be carried forward for the following year (the uncertainty buffer for the project area at section 2 of this Schedule) must be calculated and forwarded separately for each project area part.

These values cannot be used to adjust similar values for other project areas, such as cancelling out negative values in one project area by using positive values from another project area.

Because adjusted abatement is zeroed in instances of negative abatement, amounts summed from each project area cannot be negative. Negative abatement within a project area is carried over to the adjusted abatement calculation for that project area in the next calendar year. It is important for the calculations that the abatement amounts remain linked to specific project area parts.

Example: Adjustments resulting from project area spanning rainfall zones

A project has two project area parts – one in the high rainfall zone and one in the low rainfall zone.

The project area part in the high rainfall zone is that described in example 4 in section 2 of Schedule 1 of this Explanatory Statement.

The project area part in the low rainfall zone is that described in example 3 in section 2 of Schedule 1 of this Explanatory Statement.

In summary:

Rainfall Zone	A_{EA}	$B_{U,Prev}$	$A_{EA,adj}$	$B_{U,Curr}$
High	20,000 t CO ₂ -e	-1000 t CO ₂ -e	17,100 t CO ₂ -e	1,900 t CO ₂ -e.
Low	500 t CO ₂ -e	-800 t CO ₂ -e	0 t CO ₂ -e	-300 t CO ₂ -e

In this project area, for the reporting year there is a negative amount in the uncertainty buffer in the project area part in the low rainfall zone, and a positive amount in the uncertainty buffer in the project area part in the high rainfall zone. The positive amount in the uncertainty buffer in the high rainfall project area part cannot be used to remove the negative amount in the uncertainty buffer for the low rainfall zone project area part. Each project area part is treated like a separate project area for the duration of the crediting period.

11 Adjustments resulting from lack of fire activity

Subsection 11(1) specifies that this section only applies when the sum of the mean fire frequencies $FF_{v,s}$ over the relevant calculation period (defined in section 5 of this Determination) as given by equation 8, for any of the vegetation fuel types, and over both fire seasons, is equal to zero. This section is only relevant for project years.

Subsection 11(2) specifies that if the provision in subsection 11(1) has been met, then for that calendar year, the value for $\bar{W}_{FRI,P,f,v}$ is taken to be equal to $\bar{W}_{FRI,B,f,v}$.

12 Adjustments resulting from subdivided project areas

Section 12 applies when a project area has been divided into two or more subdivided project areas. It sets out the equation used to determine the proportion of the value in the uncertainty buffer from the original project area that is attributed to each subdivided project area. For each subdivided project area, the proportion used to distribute the uncertainty buffer value is the mean annual baseline emissions for the subdivided project area compared to the mean annual baseline emissions for the original project area. This allocation of the uncertainty buffer to subdivided project areas only occurs in the year immediately after the original project area was subdivided into two or more subdivided project areas.

Schedule 2—Sequestration—calculation of adjusted contribution to net abatement amount for a calendar year

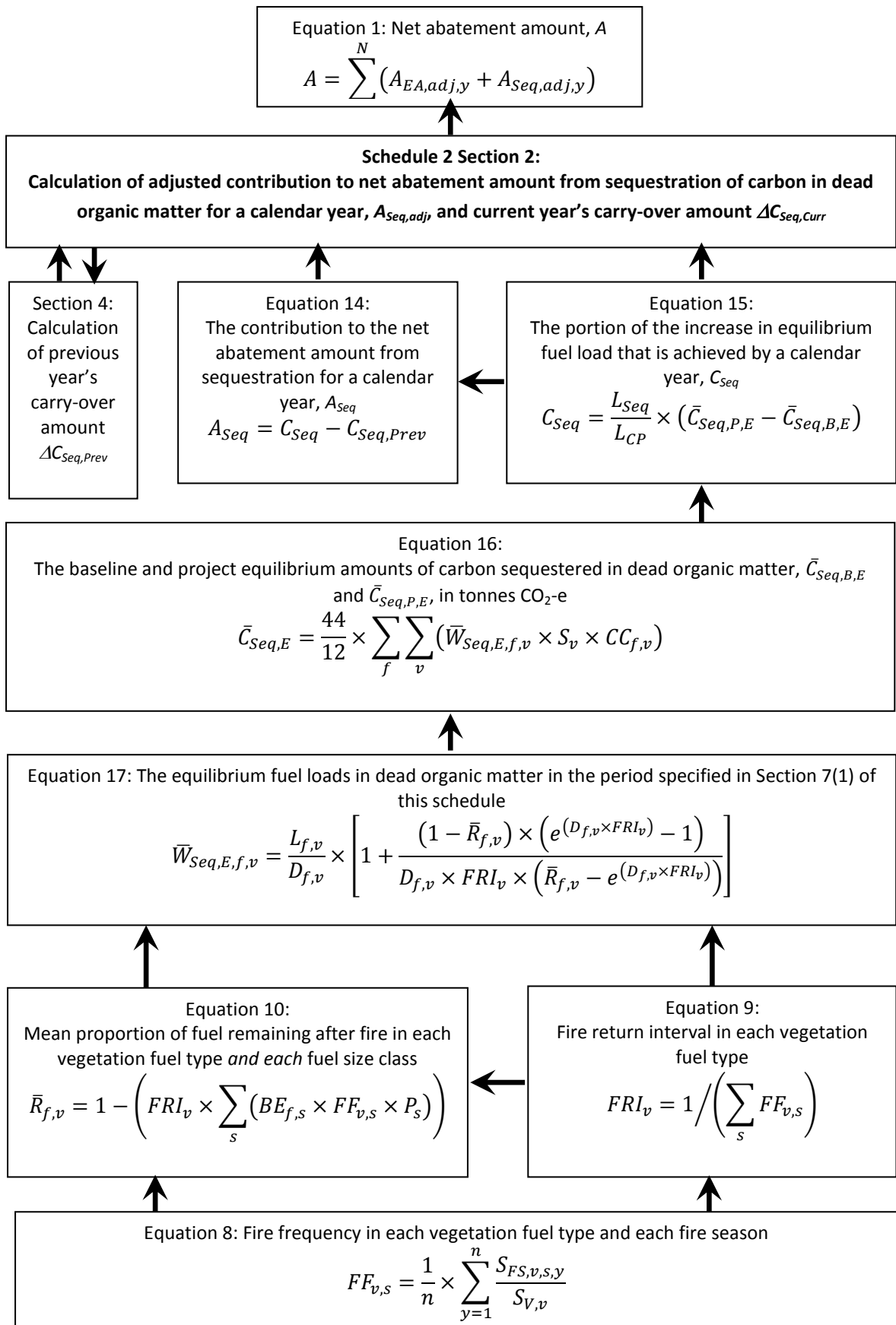
Division 1 Preliminary

1 Simplified outline of this Schedule

This section provides a simplified outline of this Schedule. While simplified outlines are included to assist readers to understand the substantive provisions, the outlines are not intended to be comprehensive. It is intended that readers should rely on the substantive provisions.

This section provides a simplified outline of how the adjusted contribution to the net abatement amount for the project area from sequestration of carbon in dead organic matter for a calendar year, $A_{Seq,adj}$, is calculated, should the project proponent choose not to use SavBAT 3. Figure 3 below provides a flow chart of how the adjusted contribution to net abatement amount from sequestration is calculated.

Figure 3: Sequestration calculations flow chart



Division 2 Calculations

2 Calculation of adjusted contribution to net abatement amount from sequestration of carbon in dead organic matter for a calendar year, $A_{Seq,adj}$

This section contains a definition of $A_{Seq,adj}$ which is the adjusted contribution to the net abatement amount arising from sequestering carbon in dead organic matter during the calendar year. The value for $A_{Seq,adj}$ in tonnes CO₂-e, is calculated separately for each project area or project area part and for each calendar year, and this value is used in equation 1 in subsection 34(1) of this Determination to estimate the net abatement amount.

A summary of the steps required to calculate $A_{Seq,adj}$ is provided.

Paragraph 2(a) specifies how to determine the previous year's carry-over amount for the project area, $\Delta C_{Seq,Prev}$, as determined in section 3 of Schedule 2. Negative carry-over values exist if the previous calendar year's net sequestration abatement was negative. This could occur if the sequestration abatement for the previous calendar year was negative, or if earlier calendar years had a negative sequestration abatement amount that had not totally been accounted for in subsequent calendar years.

Paragraph 2(b) refers to the calculation of the contribution to the net abatement amount from sequestration for the calendar year being reported on, in accordance with section 4 of this Schedule.

Paragraph 2(c) defines the value for the sequestration buffer, B_{Seq} , in accordance with section 5 of this Schedule. The sequestration buffer corresponds to the permanence period discount number and risk of reversal buffer number that applies to the sequestration component of the net abatement amount, but not to the avoided emissions component of the net abatement amount.

Paragraph 2(d) and 2(e) specify the set of conditions that apply to calculating the adjusted contribution to the net abatement amount arising from sequestering carbon in dead organic matter for the project area or project area part during the calendar year, and the current year's carry-over amount for the project area, $\Delta C_{Seq,Curr}$, in tonnes CO₂-e

A table in paragraph 2(e) specifies the appropriate approach for adjusting the value of A_{Seq} calculated in section 4 of Schedule 2 of this Determination.

The amount A_{Seq} represents the change in the amount of carbon that is taken to be sequestered in dead organic matter, and in particular, in coarse fuel and heavy fuel, in the project area during the current calendar year. A value of A_{Seq} that is less than zero represents a reversal of sequestration for the current calendar year. This does not detract from the adjusted contribution to net abatement amount from sequestration for the current calendar year, $A_{Seq,adj}$, nor from the net abatement amount for the reporting period, A . However, the negative number is carried forward to the following calendar year, and contributes to the amount $\Delta C_{Seq,Prev}$ for the following calendar year.

When $\Delta C_{Seq,Curr}$ is zero, there is no need to carry the amount $\Delta C_{Seq,Prev}$ for the following calendar year is set to zero.

Examples: Calculation of adjusted contribution to net abatement from sequestration and the current year's carryover amount for the project area – from table in Schedule 2, Section 2

In both examples, the contribution to the net abatement amount from sequestration for the project area for the calendar year, A_{Seq} , is 5,000 t CO₂-e, and the permanence period is 25 years

Example 1 – Row 1 of table

The previous year's carry-over amount for the project area, $\Delta C_{Seq,Prev}$ is equal to zero. Row 1 of the table applies because the condition has been met. That is, $A_{Seq} + \Delta C_{Seq,Prev} \geq 0$: i.e. $5,000 + 0 = 5,000$ t CO₂-e.

The value of the adjusted contribution from sequestration, $A_{Seq,adj}$, is calculated according to Row 1 of the table. Firstly, the sequestration buffer is determined from section 5 of Schedule 2 – for a project with a 25-year permanence period, the sequestration buffer is equal to 0.25. Secondly, the equation provided in Row 1 is used to determine $A_{Seq,adj}$. The calculation in this example is: $(1-0.25) \times (5,000 + 0) = 0.75 \times 5,000 = 3,750$ t CO₂-e.

The current year's carry-over amount for the project area, $\Delta C_{Seq,Curr}$, takes on the value of zero. This value becomes the previous year's carry-over amount for the project area, $\Delta C_{Seq,Prev}$, for the following year. Only negative abatement is carried forward to following year calculations.

Example 2 – Row 2 of table

The previous year's carry-over amount for the project area, $\Delta C_{Seq,Prev}$ is -7,000 t CO₂-e. Row 2 of the table applies because the condition has been met. That is, $A_{Seq} + \Delta C_{Seq,Prev} < 0$: i.e. $5,000 + -7,000 = -2,000$ t CO₂-e.

The value of the adjusted contribution from sequestration, $A_{Seq,adj}$, is calculated according to Row 2 of the table. The value is equal to zero.

There is no sequestration abatement for this calendar year, as the positive contribution to the net abatement amount from sequestration is less than the negative value of the previous year's carry-over amount.

The current year's carry-over amount for the project area, $\Delta C_{Seq,Curr}$, is the sum of the contribution to the net abatement amount from sequestration and the previous year's carry-over amount for the project area. That is: $5,000 + (-7,000) = -2,000$ t CO₂-e. This value becomes the previous year's carry-over amount for the project area, $\Delta C_{Seq,Prev}$, for the following year.

3 The previous year's carry-over amount, $\Delta C_{Seq,Prev}$

This section defines how to calculate the previous year's carry-over amount, $\Delta C_{Seq,Prev}$ in accordance with paragraph 2(a) of Schedule 2.

Subsection 3(1) defines the value for $\Delta C_{Seq,Prev}$ as being the value of $\Delta C_{Seq,Curr}$ calculated in the previous calendar year. If $\Delta C_{Seq,Curr}$ was not calculated in the previous calendar year, then the value of $\Delta C_{Seq,Prev}$ is zero. For project areas transferring from emissions avoidance projects, this value is always equal to zero for the first calendar year under this Determination.

If the project area was subdivided during the calendar year, then the value for $\Delta C_{Seq,Prev}$ must be calculated in accordance with section 10 of Schedule 2.

Subsection 3(2) provides that, for paragraph (1)(a), if the project was reported on for the previous calendar year then the relevant value is the value reported in the offsets report.

A note to this subsection notes that paragraph (1)(a) can be modified in some cases in line with paragraph 21(2)(c) of this Determination. That is, if the requirement in lieu of the newness requirement set out in paragraph 21(2)(c) of this Determination is met, then, in accordance with subparagraph 21(3)(d)(ii) of this Determination, disregard any values that might have been calculated in relation to the project area referred to in paragraph 21(2)(c) of this Determination. This applies in the situation where a project had been undertaken in the project area or part of the project area, but no Australian carbon credit units have been issued in relation to any part of the project area while the project area was covered by any such methodology determination.

4 The contribution to the net abatement amount from sequestration for a calendar year, A_{Seq}

Section 4 sets out equation 14 which calculates the contribution to the net abatement amount from sequestration for a project area for a calendar year, A_{Seq} , in tonnes CO₂-e. The contribution to the net abatement amount from sequestration is the difference between the portion of the increase in equilibrium fuel load for the project area achieved by the end of the current calendar year, C_{Seq} , as calculated using equation 15 in section 6 of Schedule 2, and the portion of the increase in equilibrium fuel load for the project area achieved by the end of the previous calendar year, $C_{Seq,Prev}$ as calculated using equation 15 in section 6 of Schedule 2 for the previous calendar year.

A note to subsection 4(1) specifies that for projects transferring from an emissions avoidance project, $C_{Seq,Prev}$ is equal to zero for the first calendar year under this Determination.

A second note to subsection 4(1) notes that paragraph (b) of the definition of $C_{Seq,Prev}$ can be modified in some cases in line with paragraph 21(2)(c) of this Determination. That is, if the requirement in lieu of the newness requirement set out in paragraph 21(2)(c) of this Determination is met, then, in accordance with subparagraph 21(3)(d)(iii) of this Determination, disregard any values that might have been calculated in relation to the project area. This applies in the situation where a project had been undertaken in the project area or

part of the project area, but no Australian carbon credit units have been issued in relation to any part of the project area while the project area was covered by any such methodology determination.

Subsection 4(2) specifies that for paragraph (b) of the definition of $C_{Seq,Prev}$ and if the project was reported on for that year, then the relevant value is the value reported in the offsets report.

5 The sequestration buffer

This section defines the sequestration buffer that is to be applied to the sequestration abatement. This combines the effects of the risk of reversal buffer number and permanence period discount number that ordinarily apply in relation to sequestration offsets projects. The risk of reversal buffer number and permanence period discount number values are set to zero in section 9B of the Rule. The sequestration buffer effectively re-applies those discounts, but only to the abatement due to sequestration. That is, all 25-year permanence period projects have a 25 % sequestration buffer, and receive 75 % of their sequestration abatement. All 100-year permanence period projects have a 5 % sequestration buffer, and receive 95 % of their sequestration abatement. The sequestration buffer accounts for the risk that carbon sequestered as a result of the project does not remain permanently in the landscape.

This discount does not apply to the abatement due to the avoidance of emissions.

6 Calculation of C_{Seq}

Section 6 sets out equation 15, which is used to calculate the increase in equilibrium fuel load that has been achieved by the end of the current calendar year, and that has resulted from undertaking the project activity in the project area. Equation 15 calculates C_{Seq} which is used in section 4 of Schedule 2.

Equation 15 determines the incremental increase in the project equilibrium carbon pool, in tonnes CO₂-e, that can be attributed from the start of the year in which this Determination applied to the project area, to the calendar year being reported on, for both coarse and heavy fuel classes and all vegetation fuel types. The difference between the project equilibrium carbon pool and the baseline equilibrium carbon pool is multiplied by a number L_{Seq} and divided by another number $L_{CP,Seq}$. This fraction represents the number of years the project area has reported on under this Determination as a proportion of $L_{CP,Seq}$ for the project – the length of the crediting period minus the number of years the project was reported on under any savanna determination other than this Determination for a continuing transferring project. This proportion is used to determine the portion of the total difference between the project and baseline equilibrium carbon stocks that is taken to have been achieved by the end of the current calendar year.

Carbon sequestration in dead organic matter resulting from the project activity reaches a new equilibrium within the first 25 years, so the total sequestration credits are distributed across all project years up to the time taken for the new equilibrium carbon stocks in dead organic matter to be achieved. Accordingly, the general policy underlying the approach of equations

14 and 15 is that, over the usual 25 year crediting period of a savanna sequestration project, one twenty-fifth of the increase in carbon sequestration resulting from the project is awarded to the project proponent each calendar year of the crediting period.

The number $L_{CP,Seq}$ is usually the length of the crediting period, in years (that is, the period of 25 years). For some restarting transferring projects, it might be a shorter period, as a result of section 28 of this Determination. For continuing transferring projects (that is, a project to which this Determination is applied as a result of sections 128 to 130 of the Act), the amount L_{CP} will be shorter than the crediting period, and will instead be equal to the portion of the crediting period for which the project was covered by this Determination.

In contrast, the number L_{Seq} will differ for each calendar year of the crediting period, incrementing by one year each year, up until the crediting period has ended.

Examples: Determining the ratio of $\frac{L_{Seq}}{L_{CP,Seq}}$

Example 1 – a new project

A new project first commenced under this Determination in 2018. Therefore, the length of its crediting period will be 25 years.

In 2026, the project proponent is reporting on the calendar year 2025.

In this case, $L_{CP,Seq} = 25$, in accordance with paragraph 6(1)(b) of Schedule 2.

L_{Seq} is the smaller of the number of years since the project commenced (i.e. 8 years from 2018 to 2025), and 25 years—in this example: the smaller time is 8 years.

The ratio to use in equation 15 for $\frac{L_{Seq}}{L_{CP,Seq}}$ and is $\frac{8}{25}$.

Example 2 – a continuing transferring project

A project started under the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015* in 2015. In 2022 this project moved to a project under this Determination as a continuing transferring project. The project had 7 years under the former determination.

The project reports for 2022 under this Determination.

As the project is a continuing transferring project, $L_{CP,Seq}$ is equal to $25 - 7 = 18$ years.

As this is the first year under the savanna sequestration determination, the value for L_{Seq} is equal to one.

The ratio to use in equation 15 for $\frac{L_{Seq}}{L_{CP,Seq}}$ and is $\frac{1}{18}$.

Example 3 – a restarting transferring project

A project started under the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015* in 2015. In 2028 this project moved to a project under this Determination as a restarting transferring project. The project had 13 years under the former determination.

The project reports for 2028 under this Determination.

As the project is a restarting transferring project, $L_{CP,Seq}$, in accordance with subsection 28(1) of this Determination, is equal to $25 - N = 25 - 13 = 12$ years.

As this is the first year under the savanna sequestration determination, the value for L_{Seq} is equal to one.

The ratio to use in equation 15 for $\frac{L_{Seq}}{L_{CP,Seq}}$ and is $\frac{1}{12}$.

Example 4 - a restarting transferring project within the 'window period'

A project started under the *Carbon Credits (Carbon Farming Initiative—Emissions Abatement through Savanna Fire Management) Methodology Determination 2015* in 2015. In 2019 this project moved to a project under this Determination as a restarting transferring project.

The project had 4 years under the former determination. According to subsection 28(1) of this Determination, the restarting project has a 25 year crediting period as the section 22 application was made within 5 years after the commencement of this determination.

The project is reporting for 2022 under this Determination.

As the project is a restarting transferring project, $L_{CP,Seq}$ in accordance with subsection 28(1) of this Determination, is equal to 25 years.

As this is the third year under the savanna sequestration determination, the value for L_{Seq} is equal to three.

The ratio to use in equation 15 for $\frac{L_{Seq}}{L_{CP,Seq}}$ and is $\frac{3}{25}$.

7 Equilibrium fuel loads

Section 7 sets out equation 16 to estimate the value of $\bar{C}_{Seq,E}$, which is used to estimate:

- (a) $\bar{C}_{Seq,B,E}$, the baseline equilibrium carbon stock for both coarse and heavy fuels and all vegetation fuel types. This value is used in subsection 6(1) of Schedule 2.
- (b) $\bar{C}_{Seq,P,E}$, the project equilibrium carbon stock for both coarse and heavy fuels and all vegetation fuel types. This value is used in subsection 6(1) of Schedule 2.
- (c) the 10-year project equilibrium fuel load for a particular calendar year. This is used in subparagraph 36(3)(d)(ii) of this Determination

The value $\bar{W}_{Seq,E,f,v}$ used in equation 16 is calculated from equation 17, which determines the equilibrium amount of biomass of the relevant fuel size class present during the relevant calculation period. For the baseline equilibrium fuel load, the relevant calculation period is that defined in paragraph (a) in section 5. For the project equilibrium fuel load, the relevant calculation period is that defined in paragraph (b) in section 5. For the 10-year project equilibrium fuel load, the relevant calculation period is that defined in paragraph (c) in section 5.

The relevant fuel class sizes f for calculations under this Division are coarse fuels and heavy fuels only.

Division 3—Adjustments to calculations

8 Adjustments resulting from project area spanning rainfall zones

Section 8 specifies that if the project area spans both rainfall zones, then the contribution to the net abatement amount from sequestration, $A_{Seq,adj}$, must be calculated separately for each project area part, and then these values summed to determine the contribution to the net abatement amount from sequestration for the whole project area. Each project area part contains an area wholly within either the high rainfall zone or wholly within the low rainfall zone.

As a result of section 8, positive or negative amounts to be carried forward for the following year (the carry-over amount for the project area at section 2 of this Schedule – $\Delta C_{Seq,Prev}$) must be calculated and forwarded separately for each project area part. If such amounts are negative for one project area part, the negative does not detract from any positive abatement that might arise in the other project area part. If such amounts are positive for one project area part, the positive does not cancel out any negative abatement that might arise in the other project area part. This means that positive or negative abatement in one project area part cannot be used to offset negative or positive amounts for other project area parts.

Each year, $\Delta C_{Seq,Prev}$ can be positive or negative, and is required for calculation of the following year's abatement. Values for each project area part cannot be used to adjust values for other project area parts or other project areas. For example, if for a calendar year, the value for $\Delta C_{Seq,Prev}$ is positive in the project area part representing the high rainfall zone, this cannot be used to cancel out a negative value for $\Delta C_{Seq,Prev}$ for the project area part representing the low rainfall zone.

It is important for the calculations that the abatement amounts remain linked to specific project area parts.

9 Adjustments resulting from lack of fire activity

Subsection 9(1) specifies that this section only applies if, when calculating $\bar{C}_{Seq,P,E}$ for a particular calendar year and a particular vegetation fuel type, the sum of the mean fire frequencies $FF_{v,s}$ as given by equation 8 (in Schedule 1), over both fire seasons, is equal to zero.

Subsection 9(2) specifies that for each vegetation fuel type v for which the sum of the mean fire frequencies $FF_{v,s}$ over both fire seasons and these calendar years of the relevant calculation period equals zero, then these vegetation fuel types should not be included in the calculation of $\bar{C}_{Seq,P,E}$ for that calendar year.

Subsection 9(3) specifies that if, when undertaking calculations for a particular calendar year, the sum of the values calculated for $FF_{v,s}$ as so summed are equal to zero for all vegetation fuel types, then the amount C_{Seq} is taken to be equal to the amount $C_{Seq,Prev}$ for that calendar year. This means that if there is no fire activity in a given year, then there will be no contribution to the net abatement amount from sequestration for that year.

10 Adjustments resulting from subdivided project areas

Section 10 is relevant when a subdivided project area is first reported on, and provides for how the following amounts are calculated for the subdivided project area:

- the previous year's carry-over amount, $\Delta C_{Seq,Prev}$ – see subsection 10(1) and equation 18; and
- the portion of the increase in equilibrium fuel load for the project area resulting from undertaking the project that is taken to have been achieved in the subdivided project area by the end of the previous calendar year, $C_{Seq,Prev}$ – see subsection 10(2) and equation 19.

In both cases, the amount attributed to each subdivided project area is a proportion of the relevant amount for the original project area, where the proportion is equal to the ratio of the baseline equilibrium amounts of carbon sequestered in dead organic matter in the subdivided and original project areas.

11 Attribution of cumulative net abatement amount to a project area being removed from the project

Section 11 is relevant when a project area (including a subdivided project area) is removed from a project in order to comply with the eligibility requirement of subsection 14(2) of this Determination, or for another reason.

For example, the project area must be removed from the project if it contains a relevant weed species, or is cleared of all vegetation fuel types listed in the savanna technical guidance document. In this example, in order for the project to remain an eligible offsets project, the project area must be removed from the project. This may require subdivision to isolate the cleared or weed infested area in accordance with subsections 14(3) and section 15, so that one project area complies with the eligibility requirements in section 14 and an area that does not, and remove the non-compliant area.

If a project area is removed from a project in this manner, the reporting requirement of subsection 36(5) applies, and requires, among other things, the offsets report to include the portion of the cumulative net abatement amount that was attributable to sequestration in the removed project area, as calculated in accordance with this provision.

The calculation is undertaken in accordance with equation 20, which calculates $A_{Cumulative}$, the portion of the cumulative net abatement amount that can be attributed to sequestration for a project area that is being removed from the project. If the value for $C_{Seq,Cumulative}$ was from a previous offsets report for an earlier project area which has since been subdivided, the amount attributable to the project area being removed is calculated in accordance with equation 21.

This amount will be used by the Regulator when the project's declaration of eligibility under section 27 of the Act is varied to remove the non-compliant project area.

Statement of Compatibility with Human Rights

Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011

Carbon Credits (Carbon Farming Initiative—Savanna Fire Management – Sequestration and Emissions Avoidance) Methodology Determination 2018

This Legislative Instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the Legislative Instrument

The *Carbon Credits (Carbon Farming Initiative—Savanna Fire Management – Sequestration and Emissions Avoidance) Methodology Determination 2018* (this Determination) sets out the method for estimating abatement from eligible savanna sequestration and emissions avoidance projects. The project activity will result in an increase in the amount of carbon sequestered in dead organic matter and a net reduction of greenhouse gas emissions from savanna fires.

Project proponents wishing to implement this Determination must make an application to the Clean Energy Regulator and meet the eligibility requirements set out under this Determination. Offsets projects approved by the Clean Energy Regulator can generate Australian carbon credit units, representing emissions reductions from the project.

Project proponents can receive funding from the Emissions Reduction Fund by participating in a competitive auction run by the Clean Energy Regulator. The Government will enter into contracts with successful proponents, which will guarantee the price and payment for the future delivery of emissions reductions.

Human rights implications

This Determination does not engage any of the applicable rights or freedoms.

Conclusion

This Determination is compatible with human rights because it does not limit any human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Josh Frydenberg, Minister for the Environment and Energy