



Department of
Primary Industries and
Regional Development

Protect
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Stable Fly Management

Companion Guide to the 2026 Amendments
to the Biosecurity and Agriculture
Management (Stable Fly) Management Plan
2007



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Purpose

This guide provides

- A brief background about stable fly, its impacts, and history on the Swan Coastal Plain
- FAQs of stakeholder legal obligations and responsibilities for stakeholders of their legal responsibilities to actively reduce stable fly breeding
- FAQs about the [gazetted amendments made to the 2019 Stable Fly Management Plan](#), published in the Government Gazette, No 94 on 28 July 2026
- FAQs about the prescribed control measures in the amended [2019 Stable Fly Management Plan](#) ('the Plan').

Tip - how to use this guide

Type key word/s into the search box at the top of this PDF document (see example below)



More information

Visit www.dpird.wa.gov.au/stablefly for more information about stable fly, including practical advice about prevention and managing stable fly.

For enquiries, contact stablefly@dpird.wa.gov.au

Acknowledgements

The development of the prescribed control measures (PCMs) in the Plan is informed by the work of Dr David Cook, stable fly subject matter expert. Dr Cook undertook over 6 years of research to identify stable fly breeding sources and, through scientific trials, developed the PCMs based on integrated pest management principles.¹



Dr David Cook, DPIRD

Important Disclaimer

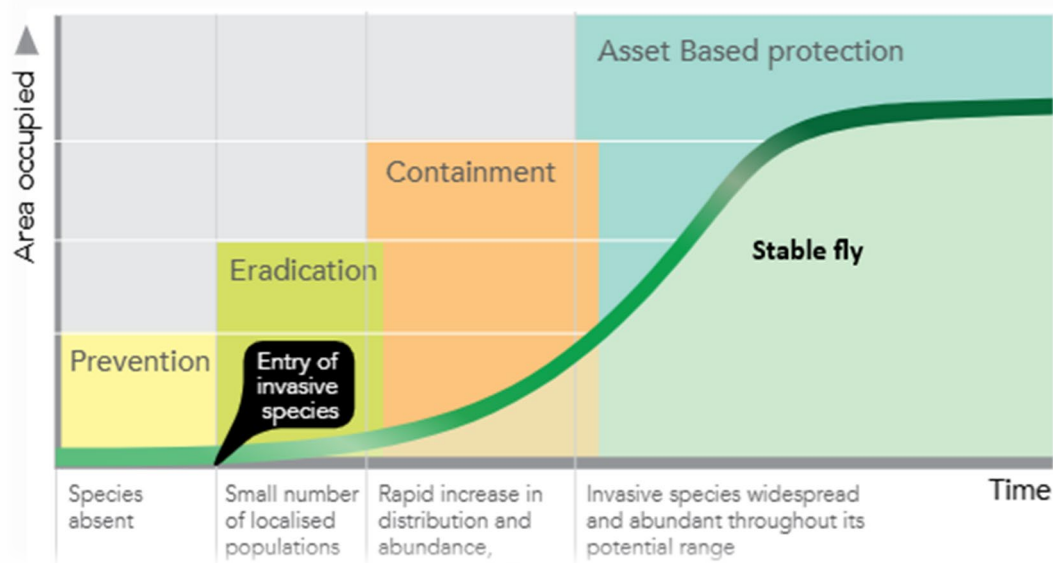
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¹ In the context of stable fly management, a systematic approach to pest control that integrates biological, cultural, physical, and chemical tools to mitigate damage caused by stable fly while reducing risks to people, the environment, and non-target species.

Biosecurity in Western Australia

Biosecurity is the management of risks to the economy, the environment and the community, of pests and diseases entering, emerging, establishing or spreading.

To help understand how pests are declared, the invasion curve, a nationally accepted model, illustrates the monetary value of interventions across the invasion pathway. The greatest return on investment is achieved by prevention and early intervention of high-risk pests whereas long term management strategies is the best option for organisms that are



The Invasion Curve indicates greater economic return on investment for actions on the left side compared with asset-based protection on the right. (Adapted from Department of Primary Industries Victoria 2009)

established over a large area.

The Minister for Agriculture manages these risks by officially classifying (declaring) organisms under the *Biosecurity and Agriculture Management Act* (BAM). This declaration determines what controls and actions can be taken and are only as strict as needed to protect human, animal, and plant health.

The Western Australian Government, through the Department of Primary Industries and Regional Development (DPIRD), focuses on preventing high-risk pests from entering and establishing in Western Australia. Examples of high-risk pests include the red imported fire ant (*Solenopsis invicta*) or brown marmorated stink bug (*Halyomorpha halys*).

Pests that have entered the state but are not yet widespread, also considered high risk and are the target of either containment or eradication. Examples include eradication of the common starling (*Sturnus vulgaris*) or Queensland fruit fly (*Bactrocera tryoni*) and European wasp (*Vespula germanica*), or containment of the cane toad (*Bufo marinus*). However, once the pest becomes established and spread over a large area, such as stable fly (*Stomoxys calcitrans*), it is no longer considered feasible to eradicate or contain.

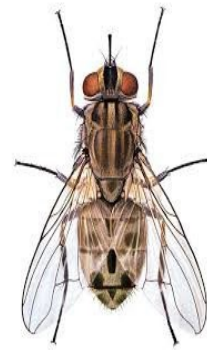
Management of established declared pests is not a task that government agencies can manage on their own and it requires cooperation and collaboration among all stakeholders

(landholders, community, industry and government). The landholder is included in the list of those who share responsibility because they are often the primary beneficiary of the pest control activities.

About stable fly

What is a stable fly?

- Stable fly is a blood feeding parasitic fly that breeds in decaying organic matter such as plant material (vegetable crop and stock feed residues) and some animal manures (poultry).
- It is also known as a biting house fly, dog fly, power mower fly, and barn fly.



Stable fly - note the distinctive mouth part used to shred the skin to draw blood

Why is a stable fly a problem?

- Stable fly feeds exclusively on fresh blood, primarily from cattle and horses, but also from humans, dogs, pigs, sheep, kangaroos and occasionally birds.
- Feeding is painful — the fly uses its sharp proboscis to pierce and tear the skin of host animals to draw blood.
- High fly numbers cause significant animal distress. When more than 20 flies attack an animal at once, they can disrupt feeding, drinking and maternal behaviours.
- Stable fly can contribute to the spread of disease between animals.
- It is a major global pest, responsible for substantial economic losses in the livestock industry.
- Its biting behaviour affects the wellbeing of people, pets, and livestock.
- The stable fly became a problem on the Swan Coastal Plain (SCP) in the mid-1990s as land-use changes brought intensive agriculture (e.g. poultry, feedlots, horticulture) into proximity with grazing and urban areas.
- The environmental condition (Mediterranean climate and sandy soils) on the SCP provides stable fly with suitable breeding conditions, but with the addition of an abundance of decaying organic material and host animals, the conditions become ideal.



Cow with an infestation of biting stable flies. More than 20 flies on one animal causes distress, limiting its ability to feed, drink or care for its young

How are established pests such as stable fly managed?

If stable fly was an emerging pest today, all efforts would be targeted to prevent its entry into Western Australia, however, it has been present in Western Australia since 1912 and is not considered feasible to eradicate.

To protect the community and animals, the Minister [declared](#) stable fly as a pest under section 22(2) of the [Biosecurity Agricultural Management Act](#) (2007) (BAM Act). The declaration sets out that stable fly is to be managed using the PCMs in the management plan.

In addition, section 30 of the Act specifies who is responsible for controlling stable fly and sets out penalties if these obligations are not met.

Effective management for pests like stable fly relies on the shared responsibility between stakeholders. For example: costs, resources and responsibility must be shared between landholders, local governments (LGAs), industry partners, and state government.

In particular:

- Landholders using the PCMs in the Plan to reduce breeding sources (plant and animal waste) on their properties
- Local governments supporting compliance and local coordination
- Industry supporting implementation of the Plan by promoting best-practice stable fly management, reinforcing member roles and responsibilities, and encouraging compliance and accountability across the sector.
- State Government providing policy, oversight, and support.



The Stable Fly Management Plan

The Plan is subsidiary legislation made under section 45 of the BAM Act and is approved by the Minister. Like regulations, it deals with the practical administration of the BAM Act – in this case, it provides for the control of stable fly for the areas where it is a declared pest. It is a regulatory instrument and is enforceable under the BAM Act.

A management plan must:

- clearly describe the area it applies to
- explain what the plan is trying to achieve
- set out the control measures that must be followed
- outline the responsibilities of landholders and others.

The Plan can also include penalties for not following these requirements, with fines of up to \$20,000.



What are Prescribed Control Measures (PCMs) and who must use them?

PCMs outline the actions required to prevent and minimise stable fly breeding.

These measures are:

- Scientifically validated Integrated Pest Management (IPM) strategies that reduce stable fly breeding while minimising reliance on chemical controls.
- Based on more than 6 years of research into stable fly biology, breeding requirements and life cycle, together with the environmental conditions of the Swan Coastal Plain, including its Mediterranean climate, sandy soils and common organic waste sources.
- Mandatory for all landholders, including owners, occupiers and other persons responsible for managing land where stable fly is a declared pest and where organic waste is generated from:
 - keeping poultry or livestock
 - vegetable production
 - olive processing that produces olive pomace.

By managing organic waste in accordance with these prescribed measures, landholders can significantly reduce stable fly breeding and help protect neighbouring communities and livestock industries.

FAQ – Legislative requirements of the Plan

Are there offences and penalties under the BAM Act relating to the Plan?

Yes - in areas where stable fly is a declared pest, section 30 (2) and (3) of the BAM Act states that landholders and owners are responsible for, and have a duty to control, stable fly if it has infested, or is likely to infest anything on their land, and must be controlled by using the PCMs in the Plan.

This means that all landholders in the declared area must use the PCMs in the Plan to manage all organic waste.



Failure to comply may result in a fine of \$20,000.

Additionally, if stable fly is found, or suspected to be on a property, an Inspector appointed under the BAM Act can issue a Pest Control Notice. This requires the person responsible for the land to follow the control measures set out in the Plan.

Failure to comply may result in a fine of \$50,000.

Why does stable fly have such strong legal implications?

Unlike pests that directly damage vegetable crops, stable fly breeding does not impact production, so some growers may see it as a lower priority and be less likely to follow the Plan.



Why is the Plan so minimal?

To fully understand any subsidiary legislation such as the Plan, it must be read in conjunction with both its corresponding Acts, in this case, the BAM Act, and the *Interpretations Act* (1984).

General drafting conventions for legislation and rules of statutory interpretation apply, for example, the plan should not repeat content from the Act, such as clauses, definitions, or the roles and responsibilities of certain parties. For example,

- Additional definitions are included in the Plan if they have a specific meaning that differ from their ordinary meaning.
- Definitions included in clause 3 'Terms used' are used throughout the Plan, whereas definitions included at the beginning of the clause if the word is used only in that clause.
- The provisions of subsidiary legislation must be succinct and clear to be enforceable.
- The Plan does not include preambles or general statements, as these are explanatory rather than enforceable provisions.
- Additional explanations or notes are only included if needed to understand the legislation.

Have new definitions been added to the Plan?

The following definitions have been added to 'Terms used'

- **poultry** means domesticated birds kept for eggs or meat;
- **rain event** means a single occurrence of rainfall exceeding 15mm that occurs between 1 October and 30 April.

FAQ - Prescribed Control Measures (PCMs)

Why is early prevention important to controlling stable fly populations?

Do not wait until adult stable flies are present - stopping the development of the life cycle is essential and easier to control stable fly populations.

1. The female stable fly is attracted to rotting organic material to lay eggs – remove or treat organic waste before it begins to rot.
2. Eggs and larvae must have moisture to survive – keep organic waste dry:
 - turn off water to the area
 - mulch waste on and below the soil surface
 - leave mulched waste and allow to desiccate.
3. When pupae turn dark red, adult flies are about to emerge — this is the final opportunity to stop the lifecycle using an **approved pesticide is now required**.

Do I have to check if there are signs of stable fly breeding and how do I check?

Yes, all landholders where stable fly is a declared pest must check all areas for evidence of stable fly breeding where there is rotting organic waste on a weekly basis.

The presence of the stable fly life cycle may be used as evidence that the PCMs are not being adequately implemented and may result in a fine of up to \$20,000.

How often do I need to use the PCMs?

PCMs are required to be applied throughout the year regardless of presence of adult stable flies.

What is considered as successful treatment?

Successful treatment means the eggs, larvae and pupae can no longer continue developing to the next stage of the lifecycle.

Is it important to know the lifecycle of stable fly?

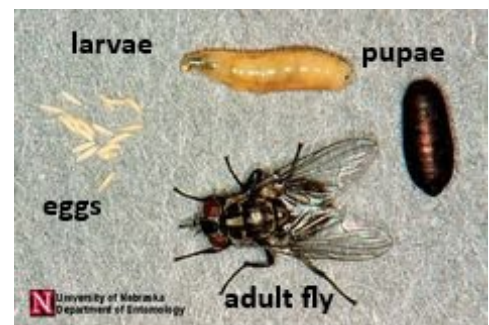
Yes! Understanding the stable fly lifecycle is important to recognise the importance of using the PCMs correctly.

Time from egg to adult fly – ambient temperature determines the length of time development takes from egg to the adult fly emerging.

For example, at temperatures ranging from 24°C to 30°C it takes between 13 to 18 days to complete the lifecycle from egg to adult fly.

At lower temperatures (10°C to 20°C), such as those likely to be experienced over winter, development can be prolonged to 7 weeks or longer.

- Using the PCMs throughout the winter is essential to kill the eggs, larvae and pupae in the soil. A concerted effort to reduce the number of adult flies emerging at the start of the warmer weather will make control throughout the summer achievable.



Stable fly life cycle



Stable fly larvae in rotting celery

The lifecycle – where to find and how to kill

- The female fly lays around 90 very small **eggs** in groups of 4 or 5.
- In summer, the eggs develop into larva in as little as 20 hours.
- The **larvae** (are extremely heat-tolerant but must have moisture) feed for up to a week before pupating.
 - Look for larvae in multiple sites where moist rotting organic matter is in contact with the soil. For example, inside rotting vegetable root stumps such as celery, cauliflower, or broccoli, under moist hay, old bedding, or stock food.
 - Larvae are mostly pale yellow to creamy white in colour and shaped like a cigar.
 - When disturbed, the larvae will move away from the light but may feign death for up to 30 seconds before moving.
 - **Turning off irrigation will reduce stable fly breeding by 85%**
- The **pupae** are the size of a grain of rice.

- The colour darkens from red/brown to black as it matures which can take as little as 5 days at high temperatures, or up to 30 days at lower temperatures.
- Pupae are found in the drier areas of the organic waste.
- To find pupae, scrape through the soil to a depth of 5–10 cm and sideways about the same distance.
- After emerging, the **adult flies** disperse, sometimes covering up to 20 kms in search of a host animal.
- The adult flies live for about 3 to 4 weeks in cooler weather but only 2 weeks in warmer weather.



Clause 7 – Untreated poultry manure (UPM)

Do I need permission to use or store UPM?

Written consent from the occupier is required to spread untreated poultry manure within 500 metres of a dwelling.

Check with your Local Government Authority (LGA) regarding storage of UPM.

Permissions from an LGA may not be needed if the manure is temporarily stored at the site of production:

- for treatment or
- before transportation outside the area covered by the Plan, or to a site licensed to accept poultry manure.
- LGAs determine this level of control and will be dependent upon the land use in the LGA.

Can I use UPM on non-irrigated pasture?

Yes, but only if:

- it is spread immediately upon arrival
- after spreading, the particle size is no more than 20 mm
- it is spread evenly at no more than 10 tonnes per hectare dry weight
- there is at least 6 weeks between applications.



A mound of untreated poultry manure that will provide a perfect breeding site for stable fly if it is stored longer than 7 days

Can I use UPM on irrigated pasture?

NO!

Are there offences and penalties regarding poultry manure?

It is an offence under section 30 (2) (3) of the BAM Act if the owner or landholder

- does not use the PCMs when
 - temporarily storing or

- failing to meet the conditions for use on non-irrigated pasture
- failing to adequately treat UPM with an approved pesticide if it contains stable fly eggs, larvae or pupae or becomes wet
- failing to obtain written consent from occupiers of any dwelling 500 m from where UPM
- is intended to be spread.

If UPM is used on irrigated pasture

Failure to comply may result in a fine of \$20,000

Clause 7A – Treated poultry manure

What is treated poultry manure and what are the ways to successfully treat it?

Correctly treated poultry manure prevents stable fly breeding and must be accompanied by a document detailing the treatment.

Successful treatment of manure involves either:

- composting to the current Australian Standard 4454 or
- mixing it thoroughly with sodium borate at least 0.5% by volume, blended evenly throughout the manure before it leaves the production site or
- mixing it thoroughly with calcium cyanamide at least 1% by volume, evenly throughout the manure before it leaves the production site.



blended

Clause 8 - Harvesting of fruits and vegetables

New definitions

- **fruit or vegetables** includes the edible part of the plant as well as leaves, stalks and root stump material left in the soil.
- **maturity** means the stage of development where a plant or its harvestable part has fully developed and reached the desired size, quality, and physiological development for consumption.



Turn off irrigation within 2 days of finishing harvesting

Do I have to harvest all crops?

- Yes – within 2 weeks, once most of the crop has reached maturity, the area must be harvested of fruit or vegetables.

What if irrigation continues, or it rains throughout harvesting?

- If irrigation is still running after 6 days from the start of harvest, or there is a rain event, you must apply an approved pesticide until runoff occurs.

What control measures do I use once harvest is finished or crop has matured?

- Within 2 days of completed harvest, turn off irrigation and then use either of the following **PCMs** to prevent stable fly breeding:



Option 1: Lift, chop and dry it out

1. Bring all stumps and remaining vegetation to the surface.
2. With a mulcher, flail mower or slasher, break it down into small pieces.
3. Leave it on the surface to dry out.
4. Inspect area for stable fly eggs, larvae or pupae after 3 days.
5. If there is evidence of breeding, treat the soil with an approved pesticide.
6. Recheck the area every 7 days for eggs, larvae or pupae.
7. If there is a rain event:
 - apply an approved pesticide within 7 days, and
 - check the area every 7 days for eggs, larvae or pupae.

Option 1 – turn off irrigation, mulch plant waste and leave to dry in the sun – note dried lines to the right



Option 2 - compacting the soil using a land roller after deeply incorporating plant waste into the soil

Option 2: Work the waste deeply into the soil

Mix the leftover crop waste into the soil using one of the 3 alternatives:

- Rotary hoe the harvested area on 5 consecutive days
- Use a counter rotating rotary hoe (aka a stone burier), prior to compacting the soil using a land roller delivering 2.5 tonnes per m²
- Use a mouldboard plough and compact the soil using a land roller delivering 2.5 tonnes per m².

What if harvesting continues for more than 6 days?

- You must check the harvested area every 7 days for the presence of stable fly eggs, larvae or pupae.
- If you find any, spray the area with an approved pesticide until runoff occurs.

How must reject produce be managed?

Either:

- fed to stock in line with the relevant requirement
- transported to a waste management facility
- deep buried.

When do I have to use an approved pesticide?

Approved pesticide must be used if:

- irrigation continues throughout harvesting
- there is a rain event

- there is evidence of stable fly breeding (eggs, larvae, pupae).

Is it an offence under the BAM Act if I do not adequately use the PCMs for plant waste?

Yes, under section 30(2) and 30(3) of the BAM Act, it is an offence not to use PCMs to adequately manage plant waste.

Failure to comply may result in a fine of \$20,000

Clause 9 Olive pomace

What must I do with olive pomace?

If the olive pomace does not get wet, you must do one of the following within 7 days:

- deep bury it, or
- treat it with an approved pesticide, or
- transport it to a facility for processing.

What do I do if the olive pomace gets wet?

If the olive pomace gets wet, you must treat it with an approved pesticide and inspect it every 7 days for stable fly eggs, larvae or pupae.

What do I do if I find stable fly eggs, larvae or pupae in olive pomace?

If you find stable fly eggs, larvae or pupae in olive pomace on relevant land, you must act immediately. You must either treat the pomace with an approved pesticide or deep bury it.

Is it an offence under the BAM Act if I do not adequately use the PCMs for olive pomace?

Yes, if you don't use the PCMs to manage organic waste from producing olive pomace, it is an offence under section 30(2) and (3) of the BAM Act.

Failure to comply may result in a fine of \$20,000

Clause 10 Keeping stock

New definition

silage means cut hay that is compacted and stored to undergo fermentation.

Who do these stock feeding and waste rules apply to?

These rules apply to people keeping stock on relevant land, including operators of abattoirs, feedlots, horse stables and piggeries.



Hay or reject produce fed in long thin lines reduces stable fly breeding environment

How can I feed hay, silage, fruit or vegetables to stock?

You can only feed conserved fodder, including hay and silage, or fruit and vegetables to stock in one of these ways:

- on a hard surface
- in a trough or hay ring
- spread on the ground in thin lines no more than 35 cm wide and 10 cm high.

What do I need to do with organic waste created from keeping stock?

Within 7 days of accumulating organic waste, if the waste remains dry:

- deep bury it
- treat it with an approved pesticide, or
- transport it to a facility for processing.



Larvae in rotting hay - inspect rotting organic material such as hay and old feed for signs of stable fly breeding

If the waste gets wet, treat it with an approved pesticide and inspect it every 7 days for stable fly eggs, larvae or pupae.

Is it an offence under the BAM Act if I do not adequately use the PCMs to manage hay products?

Yes, if you don't use the PCMs to manage plant waste from growing vegetables it is an offence under section 30(2) and (3) of the BAM Act.

Failure to comply may result in a fine of \$20,000



Cattle eating and trampling reject carrots. Feed reject produce in long thin lines to avoid uneaten produce trodden into the soil, creating a breeding environment for stable fly