Operational policy

Natural Resource Management

Locust control

Operational policies provide a framework for consistent application and interpretation of legislation and for the management of non-legislative matters by the Department of Environment and Science. Operational policies are not intended to be applied inflexibly in all circumstances. Individual circumstances may require a modified application of policy.

Policy issue

Under what circumstances and by what means may locust control activities be conducted on Queensland Parks and Wildlife Service (QPWS) managed areas?

Background

Locusts are native insects that are part of the natural biota. In Queensland, they are generally found in the dry tropics. Under certain conditions, such as following high winter or summer rainfall, populations increase and threaten significant damage to crops and pasture. Swarms often develop in the Gulf Country, the Channel Country and the Central Highland areas.

The Australian plague locust (*Chortoicetes terminifera*), migratory locust (*Locusta migratoria*) and spur-throated locust (*Austracris guttulosa*) are Class 2 declared pests under the *Land Protection (Pest and Stock Route Management) Act 2002.*

To avert the threat of plague outbreaks locally, regionally and interstate, aggregations of locusts are sprayed with chemical or biological pesticides from the ground and the air. The behaviour of some locust species means that QPWS may be requested or expected to provide an urgent response to an application to spray aggregations on its lands in certain parts of the State.

The *Nature Conservation Act 1992* provides the framework for protecting native animal species and their habitats in Queensland. For protected areas (State land), the *Nature Conservation Act 1992* specifies that written permission is required to use pesticides or living biological agents.

For State forests, forest reserves and timber reserves, the *Forestry Act 1959* and the Forestry Regulation 1998 do not refer to the use of chemicals or pesticides. However, the *Land Protection (Pest and Stock Route Management) Act 2002* specifies that by written permission, authority may be granted to a pest controller to enter land in order to eradicate, monitor or control the declared pest.

Definitions

Hoppers are juvenile nymph locusts that are similar to the adult except smaller, sexually immature and flightless.

Hopper bands are formed by dense aggregations of hopper locusts that can move across country in densities of up to 5000 insects per square metre.

Locusts and grasshoppers come from the family *Acrididae*. Locusts are distinguished from grasshoppers by their ability to swarm.

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Non-target organism (for the purpose of this operational policy) means organisms other than locusts likely to be affected by locust control programs. These could be other species of insect or other animals such as birds or fish. In addition, these could be animals that eat locusts and subsequently build up pesticide levels in their bodies.

Pesticide means a chemical insecticide or biological agent such as *Metarhizium anisopliae.*

Roosting occurs over the winter months when spur-throated locust adults remain sexually immature. During this time they roost in trees and when numbers are high, their combined mass can cause branches to break. From their roost, the locusts venture forth to feed and then return to their roost.

QPWS managed areas (for the purposes of this operational policy) include the following areas:

- protected areas (State land) under the *Nature Conservation Act 1992;* and
- State forests, forest reserves and timber reserves under the *Forestry Act 1959.*

Determination

When responding to broad scale locust control programs, QPWS will require any locust control activities on QPWS managed areas to:

- be consistent;
- have minimal environmental impact on a relatively small area; and
- be infrequent.

Active control of locusts using pesticides or biological agents on QPWS managed areas will only be approved when:

- a formal application for control has been received by QPWS (may be by facsimile or e-mail for emergency responses); and
- the application has been evaluated using the assessment criteria listed below and subsequently recommended to the director responsible for the target area.

Only control actions aimed at a defined and exploding aggregation of locusts will be considered for approval. Routine spraying as part of general preventative action to control locusts will not be approved.

Biological control agents (such as *Metarhizium anisopliae*) will be preferred over chemical insecticides where practicable.

Approval will only be given to a government agency such as Biosecurity Queensland or the Australian Plague Locust Commission (APLC).

QPWS is not obliged to contribute to any landholder-based, community or government pest contingency fund or any control activity or program, other than to pay the salary of an attending supervising QPWS officer.

Procedures

1. Application

A proposal in writing, sent by hand, e-mail, facsimile or post should address and include:

Plans

- a copy of the organisation's strategic plan for locust control;
- information about current or proposed control programs in nearby areas; and

- a map of the part or whole of the QPWS managed area showing the extent of proposed activities

Proof

- evidence or advice that all or part of the area has dense swarms (greater than 50m^2) of the spur-throated locust which are roosting and posing an immediate or imminent significant threat to economic cropping in the vicinity; and
- evidence or advice that spraying pesticide in the area will be the most effective method to control the spur-throated locust, and there is no other reasonable alternative such as driving the swarm off the areas before spraying, or spraying crops instead of the roosting area.

Alternatively, for other species of locusts such as the Australian plague locust, the migratory locust, the eastern plague locust *Oedaleus astralis* and the yellow-winged locust *Gastrimargus musicus:*

- evidence or advice that the area has been or is about to be infested by locust swarms or hopper bands that pose an immediate or imminent significant threat to economic primary production in the vicinity; and
- evidence or advice that spraying pesticide in the area can be economically justified, is an essential part of a broader locust control program and that there is no other reasonable alternative such as controlling the swarm before or after it enters the area, or driving the swarm off the area before spraying.

Means

- a plan of control operations including the means of application (preference for aerial and/or ground spraying to give the maximum impact on the locust population) and concentrations of any pesticides;
- if using a chemical insecticide, justification that the use of a biological control agent is not practicable;
- evidence the pesticides proposed to be used are Australian Pesticides and Veterinary Medicines Authority (APVMA) registered;
- evidence that all people proposed to apply pesticides are licensed chemical operators under the *Agricultural Chemicals Distribution Control Act 1966* and Agricultural Chemicals Distribution Control Regulation 1998; and
- information detailing environmental measures for coping with accidental spills or incorrect applications of pesticides in the area.

Alternatives

- details of alternative controls which have been considered to overcome the problem; and
- an assessment of all potential environmental impacts, including the probable persistence rates of pesticides.

Monitoring (also see scientific purposes permit/permit to collect section below)

- a plan to survey, rigorously record and analyse scientifically the effectiveness and environmental impact of the control program on the area's biological values, including use of minimum application rates, avoiding destruction of vegetation during spraying and minimising disturbance to native wildlife;
- a plan to conduct or have conducted systematic surveys of wildlife, including at least native insects and birds in the area proposed to be sprayed - before spraying, within seven days after spraying and 30-50 days after spraying;
- where, in an emergency situation due to time constraints, an area is subject to locust control activity without a prior survey of wildlife, a plan to survey wildlife within seven days after spraying and 30-50 days after spraying; and

- certification that representatives of the applicant will conduct or supervise the spraying operation and provide the option for a QPWS staff member to observe the spraying operation, the pre and post control monitoring and to assess any undue impact on the area's biota/environment.

2. Assessment

In considering an application, QPWS regional staff will assess the proposal and also seek advice from staff in relevant Department of Environment and Science (DES) divisions at regional and/or Central Office level.

Matters to be considered in assessment include:

- whether locusts are breeding in or moving into an area in significant numbers;
- whether control of locusts in the QPWS managed area will significantly reduce or remove the economic risk for people in adjacent areas, provided locusts do not arrive from other areas;
- whether control is necessary, especially as part of a broader control program;
- whether native title claimants or holders have been notified, if required;
- the presence of any rare or threatened organism known to be susceptible to a control method;
- whether the proposal conflicts with the provisions of an approved management plan for the area, or a conservation plan or recovery plan for a species or place of major interest;
- whether the use of a biological control agent instead of an insecticide has been considered;
- whether control can be carried out in a manner that prevents damage to the environmental values of the area to be treated;
- whether the impact of any control on the area's biological values is to be rigorously recorded and analysed scientifically;
- whether the methodology and personnel to be used for the impact and wildlife surveys are appropriate;
- whether the proposal is actually routine spraying as part of general preventative action to control locusts (such action will not be approved on QPWS managed areas).

3. Approval

The Director, Operational Support or Regional Director of the region in which the QPWS managed area is situated will approve the application with conditions, or reject the application for stated reasons.

The decision will be in writing and may be hand delivered, e-mailed, faxed or posted to the applicant.

Before an approval takes effect, a representative of the applicant must sign an acknowledgement of compliance with the conditions to be applied and return this by hand, post or facsimile to the regional manager.

Authorising staff must inform the ranger in charge of the area (or representative) of any approval to enable monitoring activities and to assess any undue impact on the area's environment.

Urgent response

Staff must be prepared to handle an application in an emergency situation, for example a mobile locust swarm of plague proportions lands in a locality which includes a protected area. The above requirements still apply, but negotiations might be conducted promptly by telephone and facsimile. Potential applicants should be encouraged to have pre-emptive benchmark surveying arrangements in place.

Reporting requirement

It is a standard condition of any approval that applicants provide a written report to QPWS detailing wildlife survey results and results of the spraying operation within six months of spraying.

Cancellation

An authorised QPWS officer can require any person conducting a locust control program to cease operation and leave the QPWS managed area if they believe approval has not been obtained or conditions of approval are not being met.

Communication

The Regional Director should consider briefing the Deputy Director-General (QPWS), the Director-General and the Minister of any major presence or breeding of locusts on QPWS managed areas, which is considered likely to pose an immediate significant threat to primary production, particularly if disputes or issues are likely to arise.

QPWS regional staff and/or the ranger in charge of the area should discuss locust control activities with local interested parties, government and non-government organisations. Co-operation should be fostered and these groups might also be able to provide valuable community monitoring of locust activity in their locality.

Other issues to consider

Defensive control

QPWS may assist in locust control activities normally undertaken by landholders, such as controlling hopper bands using ground-based methods, if the appropriate QPWS staff have received training and possess the equipment necessary to undertake such activities.

QPWS staff conducting such locust control activities with adjacent landholders will take extra precautions to minimise the impact on non-target organisms.

Scientific purposes permit/permit to collect

A condition of approval will often be that the applicant conduct systematic surveys of wildlife on the QPWS managed area.

Appropriate approvals including a separate application process will be required.

Note: Desirably, an agency will conduct a pre-emptive benchmark survey of wildlife on QPWS managed areas when conditions indicate the area might reasonably host locust swarms in the foreseeable future. This should allow a streamlined approval process if emergency action becomes necessary.

Disclaimer

While this document has been prepared with care, it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons external to the Department of Environment and Science should satisfy themselves independently and by consulting their own professional advisors before embarking on any proposed course of action.

Approved B

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Signature	Date

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