

JEV Risk Assessment and Public Events Checklist

Background

Mosquito-borne Japanese encephalitis virus (JEV) poses a serious threat to community. There is a risk that individuals may be exposed to mosquitoes carrying the virus at public events with a substantial outdoor component. A range of options are available to manage this risk. The following checklist below provides a guide to assessing event-specific risks associated with exposure to mosquitoes and JEV.

Guidance for JE Risk Matrix

Events in this risk matrix are defined as any outdoor public gathering with the potential for exposure for mosquitoes.

Each event should be assessed against the criteria in the matrix. If ALL criteria are in the low-risk column then the event can be considered low risk. If ANY of criteria are in the high-risk column the event must be considered high-risk. Events that do not meet **all** low-risk criteria, and do not meet **any** high-risk criteria will be considered moderate risk.

Low risk events do not require vector control activities but will require communication about personal protective measures.

Moderate and high-risk events require further risk assessment and consideration of vector control activities in addition to personal protective measures.

See the flow chart below to guide risk assessment of moderate and high-risk events.

| | |
|----------------------|---|
| HIGH RISK | ANY criteria in red section met |
| MODERATE RISK | No criteria in red section met and not all criteria in green section met |
| LOW RISK | ALL criteria in green section met |

| Risk Assessment | Low | Moderate | High |
|--|--|--|---|
| Criteria | | | |
| Mosquito activity | Low vector mosquito abundance ¹ | Medium vector mosquito abundance ¹ | High/Very High/Extreme vector mosquito abundance ¹ |
| JEV activity in animals or mosquitoes | No reservoir hosts ² within LGA of the event | Presence of reservoir hosts within the LGA | Detection of JEV in mosquitoes and/or reservoir hosts within the LGA or closest monitoring site, if known |
| JEV activity in humans | No suspected or confirmed cases with exposures in LGA ³ during the current mosquito season (October to May) | Suspected cases with known exposures in LGA or with exposures in LGA under investigation during the current mosquito season (October to May) | Confirmed cases with known exposure in LGA during the current mosquito season (October to May) |
| Location | Event located more than 5 km from actual or potential source of abundant mosquito populations ⁴ | Event located within 5 km of actual or potential source of abundant mosquito populations | Event located within 2km of actual or potential source of abundant mosquito populations |

| | | | |
|--------------------------------|--|---|--|
| Timing of event | Day-time event only | Late afternoon/evening event ⁵ | |
| Shading | Event exclusively located in open, un-shaded areas | Event has shaded areas (trees/buildings) ⁵ | |
| Overnight accommodation | No overnight accommodation | Overnight accommodation/camping ⁵ | |

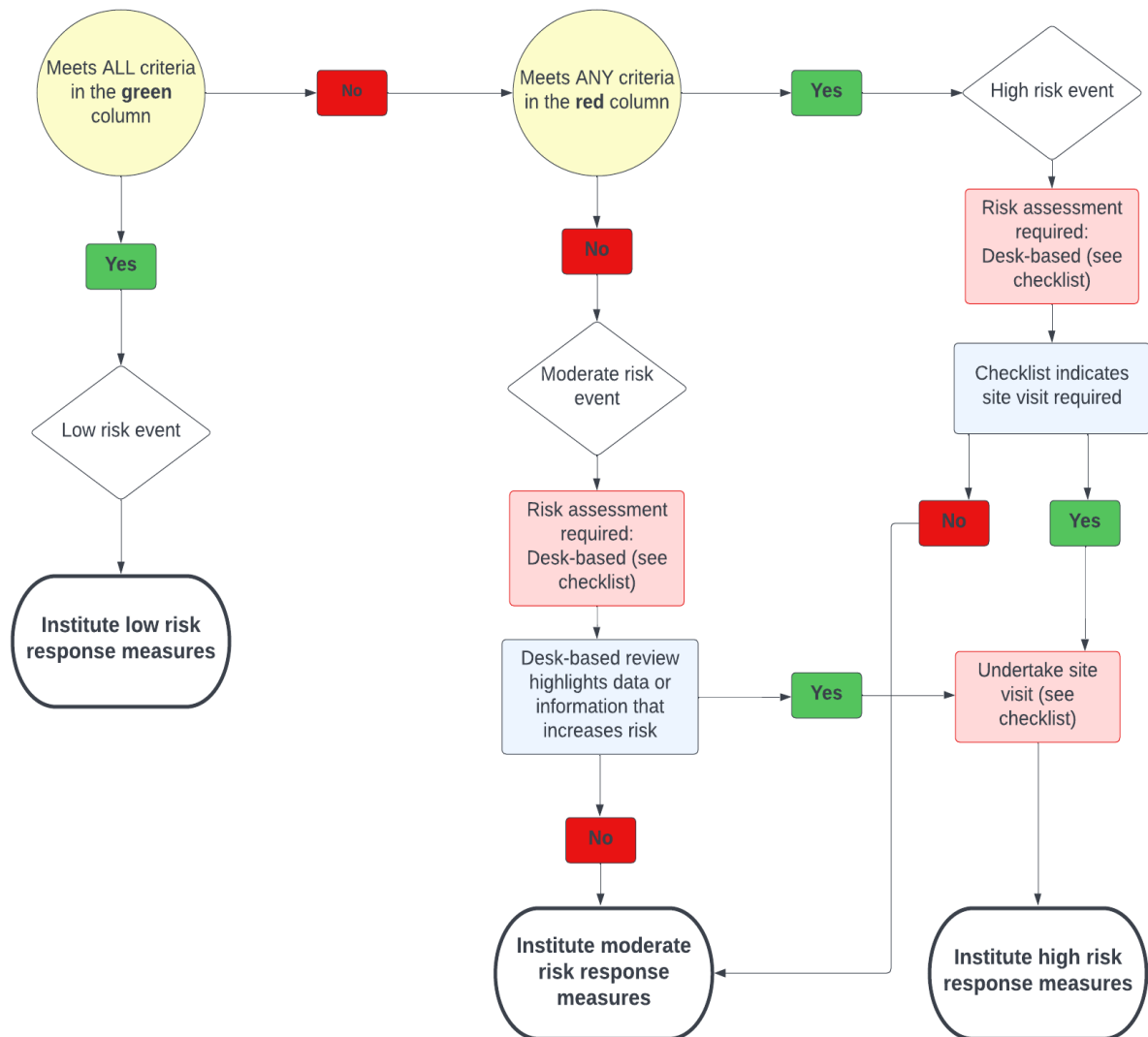
1. As per most recent data in the [NSW Arbovirus Surveillance and Mosquito Monitoring Program](#) (Low (<50), Medium (50 – 100), High (100-1000), Very high (1001-10,000), Extreme (>10,000))

2. Pigs and water birds

3. This distance is a guide only. An assessment can be made based on local knowledge of the area. If there is concern that a case was exposed in an area proximate to the event, then it should be considered moderate/high

4. Known wetlands or floodwaters identified as actual/potential source

5. These criteria alone are not enough for a high-risk event classification but do require some investigation (can be desk-based review) to ensure further risk assessment is not required (see flow diagram)



RISK ASSESSMENT (circle):

HIGH MODERATE LOW

RESPONSE MEASURES REQUIRED

| Response Measure | Low Risk | Moderate Risk | High Risk |
|---|-----------------|---|-------------------------------------|
| Larval mosquito control | Not required | May be required, subject to risk assessment | Yes |
| Adult mosquito control (residual and fogging) | Not required | May be required, subject to risk assessment | Yes |
| Personal protective measures | Yes | Yes | Yes |
| Communications | Yes | Yes | Yes |
| Signage | Yes | Yes | Yes |
| Social media | Not required | Yes | Yes |
| Mosquito repellents | Not required | Yes (made available free of charge) | Yes (made available free of charge) |
| Insecticides (knock down sprays) | Not required | May be required, subject to risk assessment | Yes |

Screening Questionnaire

Event details

| | |
|-----------------------|---|
| Name of event | |
| Date of event: | |
| Address of event: | |
| Estimated attendance: | |
| Setting of events: | For example. Indoors, outdoors, shaded areas, etc |

Mosquito activity

Is there monitoring of mosquito population within the local area as part of the NSW Arbovirus Surveillance and Mosquito Monitoring Program: YES / NO

| | | | | |
|---------------------------------------|--------|------|-----------|---------|
| Recent vector abundance of mosquitoes | | | | |
| Low | Medium | High | Very High | Extreme |

The New South Wales Arbovirus Surveillance and Mosquito Monitoring Program publishes a weekly report during the arbovirus season (usually November to April) on mosquito abundance at trapping sites, arboviral detections in mosquitoes and sentinel chicken flocks, and weather and tidal information relevant to mosquito abundance. Reports can be found on the [NSW Health website](#). For events in locations where no mosquito activity data is available, expert opinion must be sought to assess likely mosquito activity based on prevailing climatic conditions and adjacent landscape characteristics.

JEV activity in animals

Has evidence of recent JEV infection been reported in wild or domestic animals: YES / NO

[Japanese encephalitis \(nsw.gov.au\)](http://nsw.gov.au)

JEV activity in humans

Has there been a confirmed human case of JE within the LGA: YES / NO

<https://www.health.nsw.gov.au/environment/pests/vector/Pages/japanese-encephalitis.aspx>

Has there been a suspected human case JE within the LGA: YES / NO

Location

| | | | | |
|---|-------|-------|--------|-------|
| Distance of event from known wetlands (or other sources of abundant mosquitoes) | | | | |
| <500m | 1-2km | 2-5km | 5-10km | >10km |

Note: Use google maps to determine distance of event from known wetlands or other sources of abundant mosquitoes. If using online images, note the date of image to ensure it is providing a suitable indication of likely habitat.

Timing of event

| | | | | | |
|-----------------|---------|-----|-----------|---------|-----------|
| Timing of event | | | | | |
| Pre-dawn | Morning | Day | Afternoon | Evening | Overnight |

Shading

| |
|-----------------|
| Amount of shade |
|-----------------|

| | |
|--|--|
| Event exclusively located in open, un-shaded areas | Event has shaded areas (trees/buildings) |
|--|--|

Overnight accommodation

| | |
|----------------------------|---------------------------------|
| Accommodation | |
| No overnight accommodation | Overnight accommodation/camping |

DESK-BASKED RISK ASSESSMENT

All moderate risk events require a desk-based risk assessment and if the assessment highlights missing data or information, a site visit may be required

Existing mosquito management

1. Is there an existing mosquito management program within the local region: YES / NO
2. Is mosquito control (e.g. insecticide use) undertaken within the local region: YES / NO
3. Is there an existing mosquito management plan for the event: YES / NO
4. Is there an existing plan for promotion of personal protection measures associated with the event: YES / NO

SITE VISIT CHECKLIST

A site visit may be required based on the information gathered during the desk-based assessment

1. During the visit, have you noticed any mosquito activity: YES/NO
2. Does the event organiser have plans to prominently display personal protection measures: YES/NO
3. Is the event providing any mosquito repellents or selling repellents on site: YES/NO
4. Have the event organisers treated pools of water with larvicides or drained the pools of water: YES/NO
5. Has the event organiser undertaken any fogging of the site: YES/NO
6. Have patrons or workers on site complained about mosquitoes: YES/NO

Appendix 1: Data sources and further information:

NSW Arbovirus Surveillance and Mosquito Monitoring Program

<https://www.health.nsw.gov.au/environment/pests/vector/Pages/nswasp-weekly-report-2021-22.aspx>

NSW Department of Primary Industries <https://www.dpi.nsw.gov.au/biosecurity/animal/info-vets/japanese-encephalitis>

Animal Health Australia National Arbovirus Monitoring Program (NAMP)

<https://animalhealthaustralia.com.au/maintaining-access-to-arbovirus-sensitive-markets/>

Bureau of Meteorology regional forecasts <http://www.bom.gov.au/nsw/forecasts/>