

NAQS animal health surveillance activities 2020-21

This document provides a reconciliation of the NAQS animal health operational activities delivered for 2020-21. Detail about risk area profiling methodology, reconciliation with prior year activities, and timing for each activity is not included here and can be found in other NAQS program documents. Further detail on specific activities can be found in each NAQS survey report and other end of year reporting documents.

Surveillance activity summary

A total of 184 animal health related surveillance activities were planned for 2020-21 (Table 1). A total of 216 activities were delivered (Figure 1). These activities were focused in key risk areas for national and NAQS priority animal diseases (Northern Australia Quarantine Strategy Risk Review 2019, AusVet), and include feral animal surveys, domestic animal surveys, avian influenza wild bird surveys, sentinel herd blood collections, *Culicoides* (midge) trapping, screw worm fly trapping and mosquito trapping surveillance activities (Figure 1).

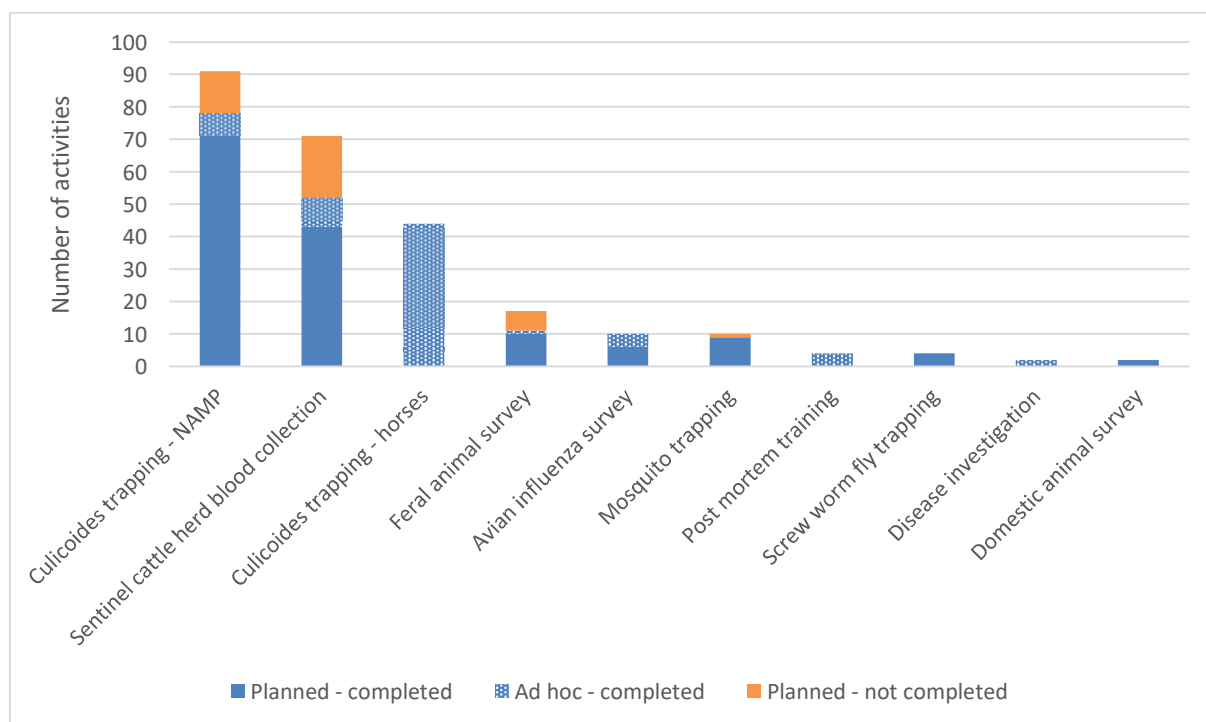


Figure 1 NAQS planned versus delivered animal health surveillance activities

The increase in activities delivered compared to those planned was due to several factors including:

- Addition on *Culicoides* (midge) trapping near horses (total of 44 trap collections) to support an African horse sickness preparedness project being funded by the department and delivered by Berrimah Veterinary Laboratory, NT.
- Addition of more avian influenza wild bird surveys (total of 4 additional surveys), aligned to a change in the operational plan of the National Avian Influenza Wild Birds Surveillance Program, recommending increased frequency of surveillance activities.
- Delivery of post mortem training workshops for key stakeholders (including Indigenous and Parks and Wildlife rangers) as stand-alone activities, in addition to those delivered during feral animal surveys. Several of these workshops resulted in abnormal findings and subsequent disease investigations.
- Completion of two stand-alone disease investigations. One involving the sudden death of pigs in Torres Strait and one involving a mortality event in little red flying foxes.

Of those activities that were planned and not delivered, the bulk were associated with National Arbovirus Monitoring (NAMP) activities (sentinel cattle herd blood collection and *Culicoides* trapping near cattle), where 80% of activities were completed as contracted. Third-party dependencies outside of NAQS' control led to 20% of these activities not being delivered. NAMP activities are partially cost-recovered, with NAQS completing in excess (>100%) of the cost-recovered activities.

Of 16 planned feral animal surveys, 11 planned survey areas were covered through 9 surveys (i.e., on two occasions, two planned surveys were combined and delivered as a single survey). Another planned survey was delivered in part, as land access permissions could not be obtained for the other part of the survey area. Another two surveys were not delivered due also to land access permissions not being granted in time. After early planning suggested low feral pig densities in the planned survey area, one survey was deliberately delayed approximately 6 months. The survey area for one planned survey was changed to provide assistance to the NT Health-led Japanese encephalitis response. All feral animal survey areas that were not able to be covered in 2020-21 as planned have been scheduled to be covered in 2021-22.

Disease exclusion data

NAQS conducts exclusion testing for several pests and diseases as part of its routine surveillance activities. A summary of pests and diseases routinely tested for each NAQS surveillance activity can be found in Table 2. Additional disease exclusion testing is conducted for any disease investigations conducted by NAQS; any national notifiable disease investigation (NNDI) data is reported to NAHIP for domestic animals, and to eWHIS for wild (including feral) animals.



Table 1 Detailed description of NAQS animal health surveillance activities planned and delivered in 2020-21

State	NAQS risk area	Risk	Activity	Location	Number of activities planned	Number of activities delivered			% (delivered / planned)
						Planned	Ad hoc	TOTAL	
NT	N1aN2a	MEDIUM	Feral animal survey	East Arnhem Land	1			0	0%
NT	N2a	MEDIUM	<i>Culicoides</i> trapping - NAMP	Garrihiya Station	12	12		12	100%
NT	N2a	MEDIUM	Sentinel cattle herd blood collection	Garrihiya Station	12	12		12	100%
NT	N2b	MEDIUM	Post mortem training	Garrihiya Station	0		1	1	
NT	N3N4N5	HIGH	Feral animal survey	Arnhem Land - Cape Wilberforce to base of Cobourg Peninsula	1	1		1	100%
NT	N3N4N5	HIGH	Post mortem training	Arnhem Land - Cape Wilberforce to base of Cobourg Peninsula	0		1	1	
NT	N5	HIGH	<i>Culicoides</i> trapping - horses	Croker Island	0		1	1	
NT	N5	HIGH	<i>Culicoides</i> trapping - horses	Murgenella Plains	0		1	1	
NT	N5	HIGH	<i>Culicoides</i> trapping - NAMP	Gunbalanya Station	12	12		12	100%
NT	N5	HIGH	Feral animal survey	King River to Cobourg Peninsula	1			0	0%
NT	N5	HIGH	Sentinel cattle herd blood collection	Gunbalanya Station	12	11		11	92%
NT	N6	HIGH	<i>Culicoides</i> trapping - NAMP	Cobourg Peninsula	12	12		12	100%
NT	N6	HIGH	Feral animal survey	Cobourg Peninsula	1	1		1	100%
NT	N7	HIGH	<i>Culicoides</i> trapping - NAMP	Melville Island	12	10		10	83%
NT	N7	HIGH	Feral animal survey	Tiwi Islands	0		1	1	
NT	N8a	LOW	<i>Culicoides</i> trapping - horses	Opium Creek Station	0		2	2	
NT	N8aN9	LOW	Feral animal survey	Wildman River National Park	1	1		1	100%
NT	N8aN9	LOW	Post mortem training	Opium Creek Station and Fogg Dam	0		1	1	
NT	N9	LOW	<i>Culicoides</i> trapping - horses	Fannie Bay Equestrian Centre, Darwin	0		2	2	
NT	N9	LOW	<i>Culicoides</i> trapping - horses	Humpty Doo	0		1	1	
NT	N9	LOW	<i>Culicoides</i> trapping - horses	Bees Creek	0		1	1	
NT	N9	LOW	<i>Culicoides</i> trapping - horses	Knuckey's Lagoon Darwin	0		2	2	
NT	N9	LOW	<i>Culicoides</i> trapping - horses	Crocodylus Park, Darwin	0		1	1	
NT	N9	LOW	Avian influenza survey	Koolpinyah Station	2	2		2	100%
NT	N9	LOW	Avian influenza survey	Leanyer/Sanderson Waste Ponds, Darwin	0		3	3	
NT	N12	MEDIUM	<i>Culicoides</i> trapping - horses	Auvergne Station	0		1	1	

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State	NAQS risk area	Risk	Activity	Location	Number of activities planned	Number of activities delivered			% (delivered / planned)
						Planned	Ad hoc	TOTAL	
NT	N12	MEDIUM	Post mortem training	Timber Creek	0		1	1	
NT	N12W2	LOW	Feral animal survey	Pearce Point to WA border and north-east Kimberley region	1	1		1	100%
NT	NT	LOW	<i>Culicoides</i> trapping - horses	Katherine	0		5	5	
QLD	Q1aQ1bQ2Q3	MEDIUM	Domestic animal survey	Torres Strait	1	1		1	100%
QLD	Q1b	LOW	<i>Culicoides</i> trapping - horses	Badu Island	0		2	2	
QLD	Q1b	LOW	<i>Culicoides</i> trapping - horses	Moa Island	0		1	1	
QLD	Q1b	MEDIUM	Disease investigation	Moa island	0		1	1	
QLD	Q2	MEDIUM	Domestic animal survey	Torres Strait	1	1		1	100%
QLD	Q3	HIGH	<i>Culicoides</i> trapping - NAMP	Seisia	12	12		12	100%
QLD	Q3	HIGH	Mosquito trapping	NPA	10	9		9	90%
QLD	Q3	HIGH	Sentinel cattle herd blood collection	Seisia	12	2		2	17%
QLD	Q3	HIGH	Screw worm fly trapping	NPA	4	4		4	100%
QLD	Q3Q4aQ4bQ6a	HIGH	Feral animal survey	Eastern Cape (Lockhart River to NPA) and western Cape (NPA to Skardon River)	1	1		1	100%
QLD	Q3Q6a	HIGH	Feral animal survey	NPA (Skardon River to Ussher Point)	1			0	0%
QLD	Q5a	HIGH	Feral animal survey	Lakefield National Park and Princess Charlotte Bay	1	1		1	100%
QLD	Q5a	MEDIUM	Avian influenza survey	Atherton	2	2		2	100%
QLD	Q6a	MEDIUM	<i>Culicoides</i> trapping - horses	Bertiehaugh Station	0		11	11	
QLD	Q6a	MEDIUM	<i>Culicoides</i> trapping - horses	York Downs Station	0		11	11	
QLD	Q6a	MEDIUM	<i>Culicoides</i> trapping - NAMP	Bertiehaugh Station	0		7	7	
QLD	Q6a	MEDIUM	<i>Culicoides</i> trapping - NAMP	Merepah Station	12	1		1	8%
QLD	Q6a	MEDIUM	<i>Culicoides</i> trapping - NAMP	York Downs Station	12	12		12	100%
QLD	Q6a	MEDIUM	Feral animal survey	Kowanyama and Rutland Plains Station	1	1		1	100%
QLD	Q6a	MEDIUM	Feral animal survey	Porpuraaw and Aurukun	1			0	0%
QLD	Q6a	MEDIUM	Sentinel cattle herd blood collection	Bertiehaugh Station	0		9	9	
QLD	Q6a	MEDIUM	Sentinel cattle herd blood collection	Merepah Station	12	4		4	33%
QLD	Q6a	MEDIUM	Sentinel cattle herd blood collection	York Downs Station	12	12		12	100%
QLD	Q6b	MEDIUM	Feral animal survey	Mapoon and Napranum	1			0	0%

Northern Australia Quarantine Strategy animal health surveillance activities 2019-20

<i>State</i>	<i>NAQS risk area</i>	<i>Risk</i>	<i>Activity</i>	<i>Location</i>	<i>Number of activities planned</i>	<i>Number of activities delivered</i>			<i>% (delivered / planned)</i>
						<i>Planned</i>	<i>Ad hoc</i>	<i>TOTAL</i>	
WA	W1	LOW	Avian influenza survey	Kununurra	1	1		1	100%
WA	W4	LOW	Sentinel cattle herd blood collection	Kalumburu	2	2		2	100%
WA	W7a	LOW	Feral animal survey	Dampier Peninsula	1	1		1	100%
WA	W7b	LOW	<i>Culicoides</i> trapping - horses	Broome Rodeo Ground	0		2	2	
WA	W7b	LOW	Avian influenza survey	Broome	1	1		1	100%
WA	W7b	LOW	Avian influenza survey	Broome Wastewater Treatment Ponds	0		1	1	
WA	W7b	LOW	Disease investigation	Broome	0		1	1	
WA	W8	LOW	Feral animal survey	South of Broome	1	1		1	100%
WA	W9	MEDIUM	Feral animal survey	East Kimberley	1			0	0%
WA	W9	MEDIUM	Feral animal survey	West Kimberley	1	1		1	100%
TOTAL					184	145	71	216	117%



Table 2 Routine pest and disease testing and reporting for NAQS routine animal health surveillance activities

<i>Activity</i>	<i>Routine pest and disease testing</i>	<i>Data reporting (surveillance program)</i>	<i>Surveillance program</i>
Avian influenza survey	Avian influenza	eWHIS	National avian influenza in wild birds (NAIWB) program
<i>Culicoides</i> trapping - NAMP	Species identification for detection of bluetongue virus vectors	NAMP	National arbovirus monitoring program (NAMP)
<i>Culicoides</i> trapping - horses	Species identification and blood meal analysis to detect horse-feeding midges	NAMP	Not applicable (research project)
Domestic animal survey	African swine fever (pigs) Aujeszky's disease (pigs) Classical swine fever (pigs) <i>Ehrlichia canis</i> (dogs) Japanese encephalitis (pigs, horses) Surra (<i>Trypanosoma evansi</i>) (all mammals)	NAHIS	National animal health information program (NAHIP)
Feral animal survey and Post mortem training	African swine fever (pigs) Aujeszky's disease (pigs) Classical swine fever (pigs) Surra (<i>Trypanosoma evansi</i>) (all mammals)	NAHIS	NAHIP
Mosquito trapping	Flaviviruses: • Barmah Forest virus • Japanese encephalitis virus • Kunjin virus • Murray Valley encephalitis virus • Ross River virus	Queensland Health	(Queensland) Mosquito borne diseases surveillance program
Screw worm fly trapping	Species identification to rule out screw worm fly (Old and New World)	NAHIS	Screwworm fly surveillance and preparedness program (SWFSPP)
Sentinel / serosurveillance cattle herd blood collection	Bluetongue virus Japanese encephalitis Surra (<i>Trypanosoma evansi</i>)	NAHIS	NAMP + NAHIP