European Wasp Spring Queen Trapping Program 2023

Jerrabomberra Wetlands Nature Reserve

ACT Parks & Conservation Services

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eWasp© Research & Monitoring Programs

CoreEnviro Solutions Pty Ltd image
European wasp queen.

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Directors Summary

CoreEnviro Solutions European Wasp (eWasp™) Spring Queen Trapping Program Report 2023 to ACT Parks & Conservation Services. The information in this report is for the period 1 October - 25 November 2023.

About us

CoreEnviro Solutions is a Canberra-based service provider specialising in the delivery of noxious/environmental, agricultural, horticultural, aquatic pest and weed management, and pest control solutions.

Our main objective is to save our native species. We are committed to educating the public on invasive and beneficial species.

Innovation

CoreEnviro Solutions Pty Ltd is committed to minimising the establishment and spread of eWasps in Australia.

We are committed to research and implementing new and improved innovative programs in environmental pest management, this is achieved through improved nest reporting along with insect and arachnid information and identification via both the eWasp mobile app and website.

Notes on Data

Count is the number of European wasp queens trapped and removed from the trap station.
The SQ count is the count day in which the European wasp queen counts were conducted.
European wasp season runs from September through to April.
(eWasp Spring queen survival rate is approx. 30%)

Weather El Niño

El Niño typically means:

- Reduced rainfall
- Warmer temperatures
- Shift in temperature extremes
- Increased frost risk
- Reduced tropical cyclone numbers.
- Later monsoon onset
- Increased fire danger in southeast Australia
- Decreased alpine snow depths[1]

Acronyms

eWasp	European wasp
SQ	Spring Queen
JW NR	Jerrabomberra Wetlands Nature Reserve
PCS	ACT Parks & Conservation Services

[1] *What is El Niño and what might it mean for Australia? (bom.gov.au)*

Executive Summary Table

- 22 non-chemical lure trap stations were deployed at Jerrabomberra Wetlands Nature Reserve.
- 521 eWasp queens were trapped and removed from the environment.
- $114,620.00 in estimated total savings on nest treatments (if all queens produced viable nests).
- Prevented an estimated 2,084,000 worker wasps impacting the environment (if all eWasp queens produced viable nests).
- Prevented an additional 156,300 next generation eWasp queens from establishing nests (based off 30% survival rate).
- Saved ACT Parks & Conservation Services staff approximately 1,042 hours or 130 working days in time spent treating eWasp nests.
- Significantly reduced the use of pesticide required, 104 kg of Permethrin dust, to control established nests in the Jerrabomberra Wetlands Nature Reserve.
- Vespex is a non-chemical carbohydrate-based lure proved to have low impact on the environment and native species.

2021 saw a total of 104, 2022 saw a total of 217, and 2023 saw a total of 521 eWasp spring queens at Jerrabomberra Wetlands Nature Reserve.

Directors Comments

Welcome to the European Wasp Spring Queen Trapping Program Report for 2023. The trapping program at Jerrabomberra Wetlands Nature Reserve was conducted by CoreEnviro Solutions Pty Ltd for ACT Parks & Conservation Services.

Canberra is the bush capital of Australia. There are 39 nature reserves in and around Canberra for Canberrans, and tourist, to utilise and enjoy.

Jerrabomberra Wetlands Nature Reserve is centrally located in Canberra. The Wetlands are part of Molonglo River and is 174 hectares of protected area, abundant with birdlife and other animals. There is a 3.2-kilometer pathway around the wetlands for the public to enjoy all the Wetlands have to offer.

For several years, Jerrabomberra Wetlands has been inundated with European wasp activity due to the location of the wetlands; it is in proximity to cafés, bars, restaurants, an industrial area and Molonglo River. The environment in the wetlands makes it suitable for insects, which European wasp prey on.

European wasps have become a nuisance to nearby residents and a risk to public safety, they also have a negative impact on the environment.

Over the last several seasons, the eWasp team has identified several hot spot locations, one being Jerrabomberra Wetlands, and surrounding areas such as Molonglo River and Jerrabomberra Creek, which include the suburbs of Pialligo, Fyshwick, Campbell and Narrabundah.

In this report, you will see an increase in eWasp spring queens captured and removed during the 2023 program, but neither an increase nor decrease in wasp nests from the 2021/2022 wasp season.

A spring queen trapping program was conducted in 2022, from Clare Holland House to Pialligo Gardens, a total of 673 spring queens were captured and removed from the environment.

Molonglo River Nests 2023	Total
Campbell	9
Pialligo	4
Fyshwick	4
Grand Total	17

After the 2022 spring queen trapping program, the 2023 season identified 17 eWasp nests along Molonglo River (Campbell, Pialligo and Fyshwick), an increase of 55% but numbers still substantially lower from the previous season in 2021.

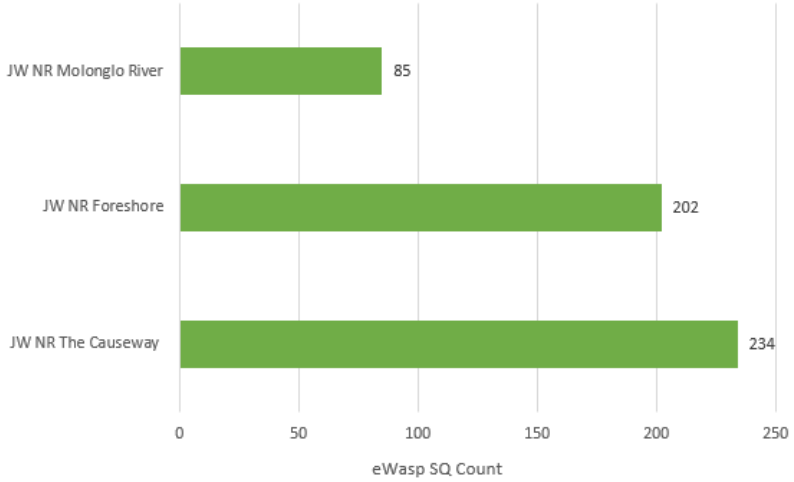
We believe the increase in eWasp spring queen activity was forecast in the eWasp data collection in 2023, a peak wasp season for 2024.

The 2023 eWasp spring queen trapping program deployed 22 traps at Jerrabomberra Wetlands The Causeway, Jerrabomberra Wetlands Foreshore, and Jerrabomberra Wetlands Molonglo River. The program used a non-chemical carbohydrate product called Vespex by Sundew, see product information here.

Program Results

There was a total of 22 European wasp spring queen traps deployed in Jerrabomberra Wetlands. The program ran from 1 October to 25 November 2023. (Pre-program data is included in the Directors Comments Program Results)

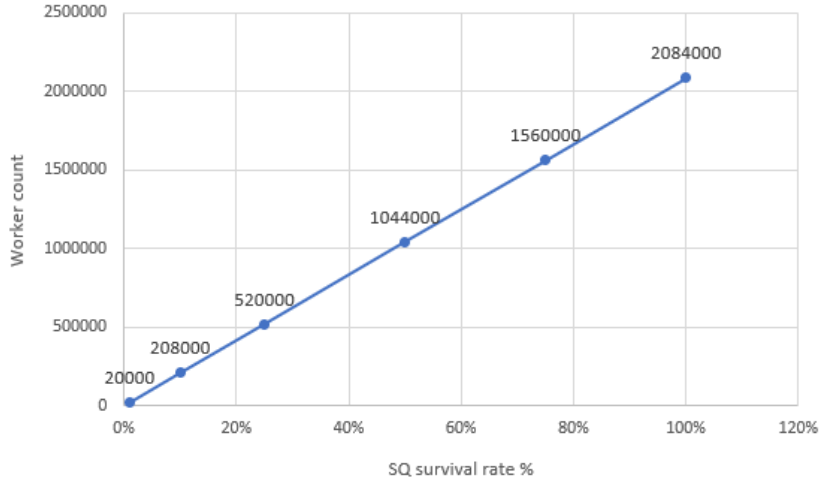
Chart 1 shows the total count by location.



The program was broken up into three (3) areas, Jerrabomberra Wetlands, The Causeway, Jerrabomberra Wetlands Foreshore, and Jerrabomberra Wetland Molonglo River.

The trapping trial was successful in capturing 521 eWasp spring queens with little impact on the environment and native species. By removing the queens from the environment, we have eliminated the potential of 100,000's of invasive wasps impacting the environment at Jerrabomberra Wetlands Nature Reserve.

Chart 2 shows the count of workers by queen's survival rate.



By removing eWasp Spring Queens from Jerrabomberra Wetlands environment, it has prevented the establishments of 521 nests, an estimated 2,084,000 European worker wasps, and an additional 156,300 next generation queens impacting the environment and the surrounding areas.

Data Comparison

Table 1 shows the comparison eWasp queen counts by location and year. The pre-program data is included in the table below.

Location	2023	2022	2021
Jerrabomberra Wetlands - The Causeway	234	71	17
Jerrabomberra Wetlands Foreshore	202	99	38
Jerrabomberra Wetlands Molonglo River	85	47	49
Grand Total	521	217	104

Chart 3 shows the total eWasp spring queen count by location and year.

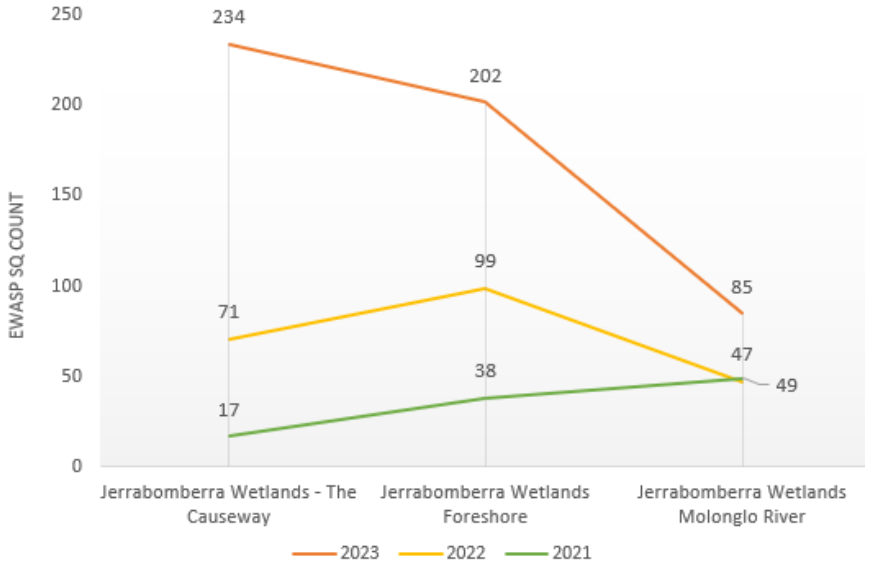


Table 2 shows the increase/decrease by location and year.

Location	2021	2022	2022 Increase or Decrease	2023	2023 Increase or Decrease
Jerrabomberra Wetlands The Causeway	17	71	317% ↑	**234**	229% ↑
Jerrabomberra Wetlands Foreshore	38	99	160% ↑	**202**	104% ↑
Jerrabomberra Wetlands Molonglo River	49	47	4% ↓	**85**	81% ↑
Grand Total	104	217	108% ↑	**521**	140% ↑

From 2021 to 2023, there has been 842 eWasp spring queens removed from this location, if all queens survived and established nests, there may have been an estimated 3,368,000 worker wasps, and an estimated 252,600 next generation queens impacting the environment and surrounding areas.

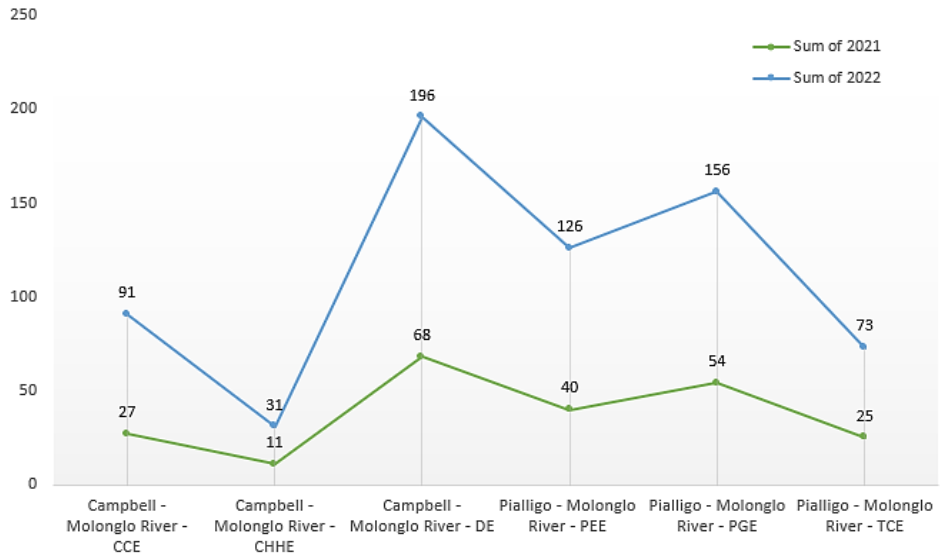
In 2023, all three (3) locations saw an increase in eWasp spring queen counts. The Causeway had the highest share with an increase of 229% or 234, followed by the Foreshore with 104% or 202, and Molonglo River with 81% or 85 eWasp spring queens caught and removed from the environment, a total increase of 108%. Overall, there was an increase of 140% or 304 eWasp spring queens at Jerrabomberra Wetlands Nature Reserve.

We believe with the continued high numbers of eWasp queens being trapped up until the last count, suggests it will be a peak season in the Jerrabomberra Wetlands and the surrounding areas, such as Fyshwick, Kingston Foreshore and Pialligo.

Although the program has been successful in capturing and removing 521 eWasp queens from the environment, it is impossible to capture every queen. The queen trapping program by eWasp, CoreEnviro Solutions Pty Ltd, is still in trial phase and further research programs will need to be conducted.

It is not known whether Transport Canberra and City Services (TCCS) conducted a spring queen trapping program, and if so, was it a full program or a scaled down program. The extent of the program across Molonglo River, Pialligo, Majura, and Narrabundah will have an impact on the Jerrabomberra Wetlands and surrounding areas. It is recommended Parks and Conservation Services obtain the 2023 data/the from TCCS regarding an urban spring queen trapping program 2023 and the outcome.

Chart 4 shows the count by location and year.

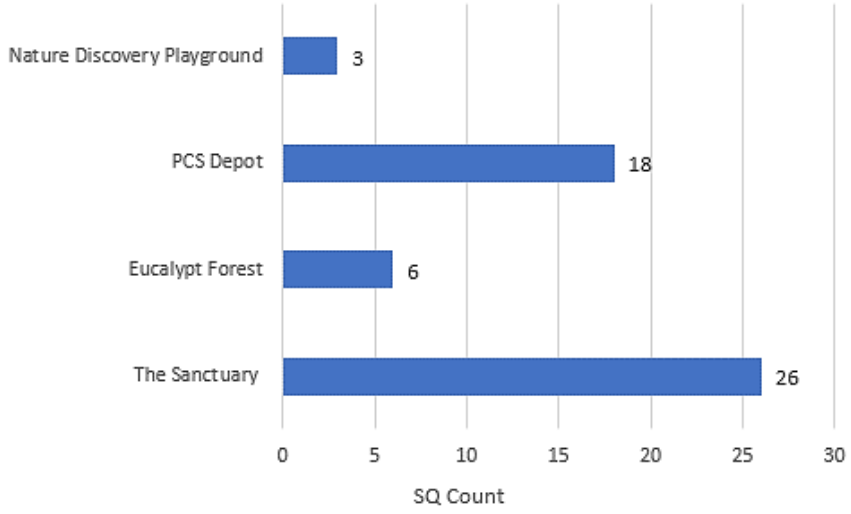


The 2022 program on TCCS land, Molonglo River, saw total of 53 European wasp spring queen trap stations deployed along Molonglo River, from Clare Holland House to Pialligo Gardens, a total of 673 spring queens were captured and removed from the environment.

Other PCS Programs 2023

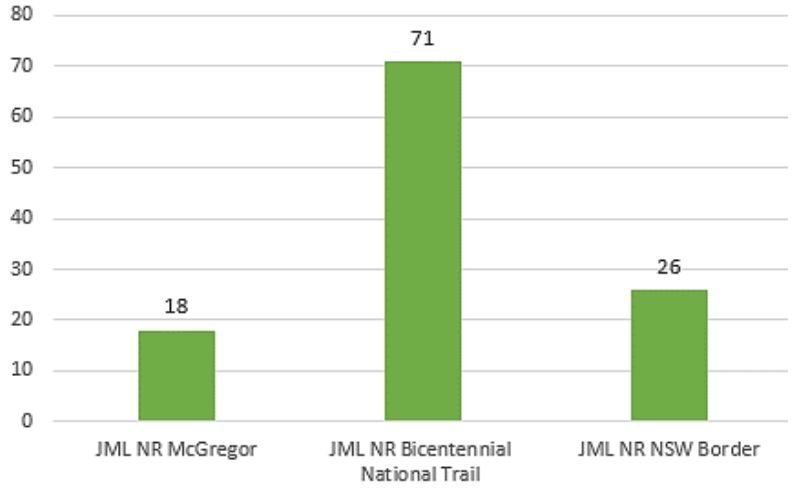
CoreEnviro Solutions Pty Ltd conducted an additional two (2) eWasp spring queen trapping programs for ACT Parks & Conservation Services, Tidbinbilla Nature Reserve and Jarramlee Grasslands Nature Reserve.

The Tidbinbilla Nature Reserve program was broken up into four (4) areas, the Sanctuary had the highest share of eWasp spring queens with 49% or 26.



The results for Tidbinbilla Nature Reserve are as follows; there were 42 traps deployed, a total of 53 spring queens were trapped and removed from the environment, a decrease of 47% from 2022.

The Jarramlee Grasslands Nature Reserve program was broken up into three (3) areas, the Bicentennial National Trail had the highest share of eWasp Spring Queens with 62% or 71.



The results for Jarramlee Grasslands Nature Reserve are as follows; there were 35 traps deployed, a total of 115 spring queens. This is the first spring queen trapping program in Jarramlee Grasslands Nature Reserve, therefore, there is no comparison data.

European Wasp Impact

European wasps have a negative impact on our native species and environment. The European wasp has no predators, therefore putting pressure on native species by consuming large amounts of insects which are normally preyed upon by native insects, reptiles, and birds.

The above images are of eWasps foraging on a Kangaroo Carcass at Mulligans Flat Road in Forde, ACT, eWasps foraging on a prey mantis, and eWasps foraging on a Brown snake at Googong Dam, ACT.

Native scavenging animals find it difficult to feed off carcasses due to large numbers of European wasps present on the carcass. Flies have been observed being attacked by European wasps and at times their heads decapitated.

An average European wasp nest can contain an estimated 4,000 wasps during the peak of the season, between February - March, and each nest can produce and additional 1,000 queens at the end of the season; survival rate for spring queens is unknown, Dr Philip Spradbery' s research shows the queen survival rate was around 30%, but further studies would need to be conducted.

Nuisance wasps that forage in large numbers prevent the public from enjoying outdoor areas such as nature reserves, parks, and open spaces, and pose a high risk to public safety.

It is known that European wasp's impact European honey bee hives, they prey on honey bees returning to the hive, rob the hive of honey and attack the brood which weakens the hive. There is no information or evidence that supports they impact native bee hives/species.

A publication in the New Zealand Journal of Zoology, 1991, stated that the European wasp's diet consists of Diptera, fly & mosquito species, lepidopteran larvae, caterpillars – moths – butterflies, and arachnids, are also an important food, this was also documented in Europe and North America.

The wasp population at Jerrabomberra Wetlands has impacted surrounding businesses such as cafes/restaurants, and industrial/trade businesses; it has also had a negative impact on the residents of Kingston Foreshore. The nuisance wasps have prevented the public from enjoying outdoor amenities such as park and open spaces. Some businesses have been impacted negatively where productivity has fallen due to nuisance eWasps. In situations such as this, there is a high risk to public safety.

Benefits of a Spring Queen Trapping Program

Treating nests on average for a Ranger can take up to two hours, from set up, to treatment, to waiting for nest activity to settle down. There is also a high risk of a stinging incident occurring.

Tracking European wasps back to a nest is extremely time consuming and does not always pay off; most Rangers don't have the time and capacity for a time-consuming task. Reported European wasp nests on public land are treated by Parkes and Conservation Services, however, there are many nests that go unreported and untreated in the reserves, these nests produce next generation queens which impact the environment.

From the 521 European wasp queens captured and removed from the environment, if all queens captured were to establish nests, 521 nests, the Parks and Conservation Services Ranger would have spent an estimated time of 1,042 hours or 130 working days treating nests, if a private company were to treat the nests at a cost of $220.00 per nest, the total cost would be $114,620.00.

The European wasp spring queen trapping program has also reduced the quantity of insecticide used at Jerrabomberra Wetlands Nature Reserve, 104 kg of Permethrin dust, which greatly benefits the environment and reduces the cost of purchasing insecticides.

The Vespex lure is a non-chemical carbohydrate that lures and traps European wasp spring queens and has proven very low impact on the environment and native species.

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Data Overview

Weather

Table 3 shows the weather conditions at **Canberra Airport** for the months of October and November 2023.

eWasp Program Weather Conditions		
Statistics	Oct-22	Nov-22
Highest daily	23 °C	26.8°C
Lowest daily	12 °C	12.9 °C
Monthly mean	8.3 °C	20.7 °C
Rainfall	166.2 mm	100.2 mm
Statistics	Oct-23	Nov-23
Highest daily	29.7 °C	33.3 °C
Lowest daily	14 °C	15.8 °C
Monthly mean	21.9 °C	25.5°C
Rainfall	32.6 mm	134.2 mm

Weather data obtained from the Bureau of Meteorology[2].

- The weather conditions for October 2023 show an increase for the monthly mean by 164% and a decrease in rainfall by 80%.
- The weather conditions for November 2023 show an increase for the monthly mean by 23% and an increase in rainfall of 34%.

More detailed weather observations can be found here.

Trap JW 4 The Foreshore, Jerrabomberra Wetlands Nature Reserve, saw a total share of 15% or 75 eWasp spring queens.

[2] *Australian Capital Territory - Daily Weather Observations (bom.gov.au)*

eWasp Data

Table 4 shows the number of eWasp nests and queen sightings by location and year, reported by the public to eWasp.

Fyshwick, ACT.

Years	2020/2021	2021/2022	2022/2023
eWasp Nests	81 nests	8 nests	13 nests
eWasp Queens	1 queen	103 queens	0 queens

Kingston, ACT.

Years	2020/2021	2021/2022	2022/2023
eWasp Nests	17 nests	3 nests	2 nests
eWasp Queens	1 queen	17 queens	0 queens

Narrabundah, ACT.

Years	2020/2021	2021/2022	2022/2023
eWasp Nests	39 nests	5 nests	7 nests
eWasp Queens	0 queen	25 queens	1 queens

Trap JW 4 The Foreshore, Jerrabomberra Wetlands Nature Reserve, saw a total share of 13% or 66 eWasp spring queens.

Pre-program Data

The three (3) pre-program traps were deployed and monitored between 1 - 9 October 2023.

Table 4 shows trap number, trap set up date, GPS coordinates and location/reserve pre-program 2023.

Trap Number	Set-up date	Latitude	Longitude	Location/Reserve
JW 1A	1-Oct-23	-35.313517	149.15516	Jerrabomberra Wetlands The Causeway
JW 2A	1-Oct-23	-35.318071	149.16191	Jerrabomberra Wetlands Foreshore
JW 3A	1-Oct-23	-35.305025	149.160794	Jerrabomberra Wetlands Molonglo River

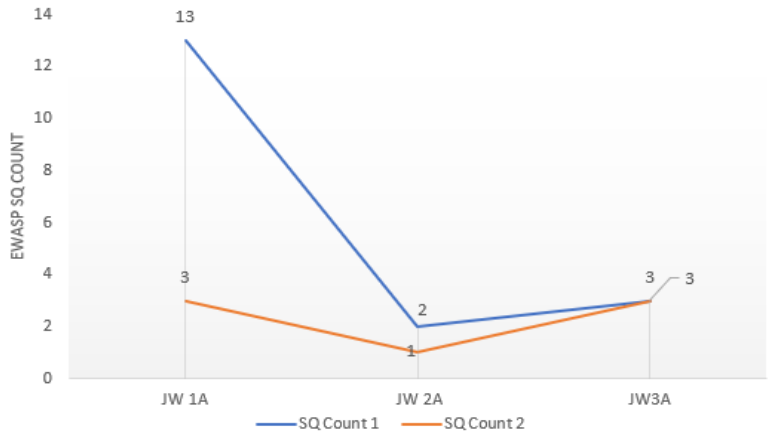
Table 5 shows the total count by location and trap number.

Location & Trap Number	Totals
Jerrabomberra Wetlands The Causeway JW 1A	16
Jerrabomberra Wetlands Foreshore JW 2A	3
Jerrabomberra Wetlands Molonglo River JW3A	6
Grand Total	25

Table 6 shows the count by trap number and count number pre-program, 2023.

Trap Number	SQ Count 1	SQ Count 2	Totals
JW 1A – The Causeway	13	3	**16**
JW 2A - Foreshore	2	1	**3**
JW3A – Molonglo River	3	3	**6**
TOTAL	**18**	**7**	**25**

Chart 5 shows the total count by trap number and location.



Trap JW 1A, the Causeway, had the highest count of eWasp spring queens pre-program with 56% or 16.

Pre-program Results

The Pre-program ran from 1 - 9 October 2023. There were three (3) traps deployed at The Causeway, Foreshore and Molonglo River. The traps had a total of 25 spring queens trapped and removed from the environment during the program period.

If all queens survived and established nests, there may have been an estimated 100,000 worker wasps, and an estimated 30,000 next generation queens impacting the environment and surrounding areas.

Previous years data in other locations around the ACT, showed commencing the program in the month of October produced more successful programs. With an El Niño year upon us in 2023, it was difficult to gage the optimum time to deploy traps, therefore, 3 pre-program traps were initially deployed to monitor activity in the area prior to commencing a full program.

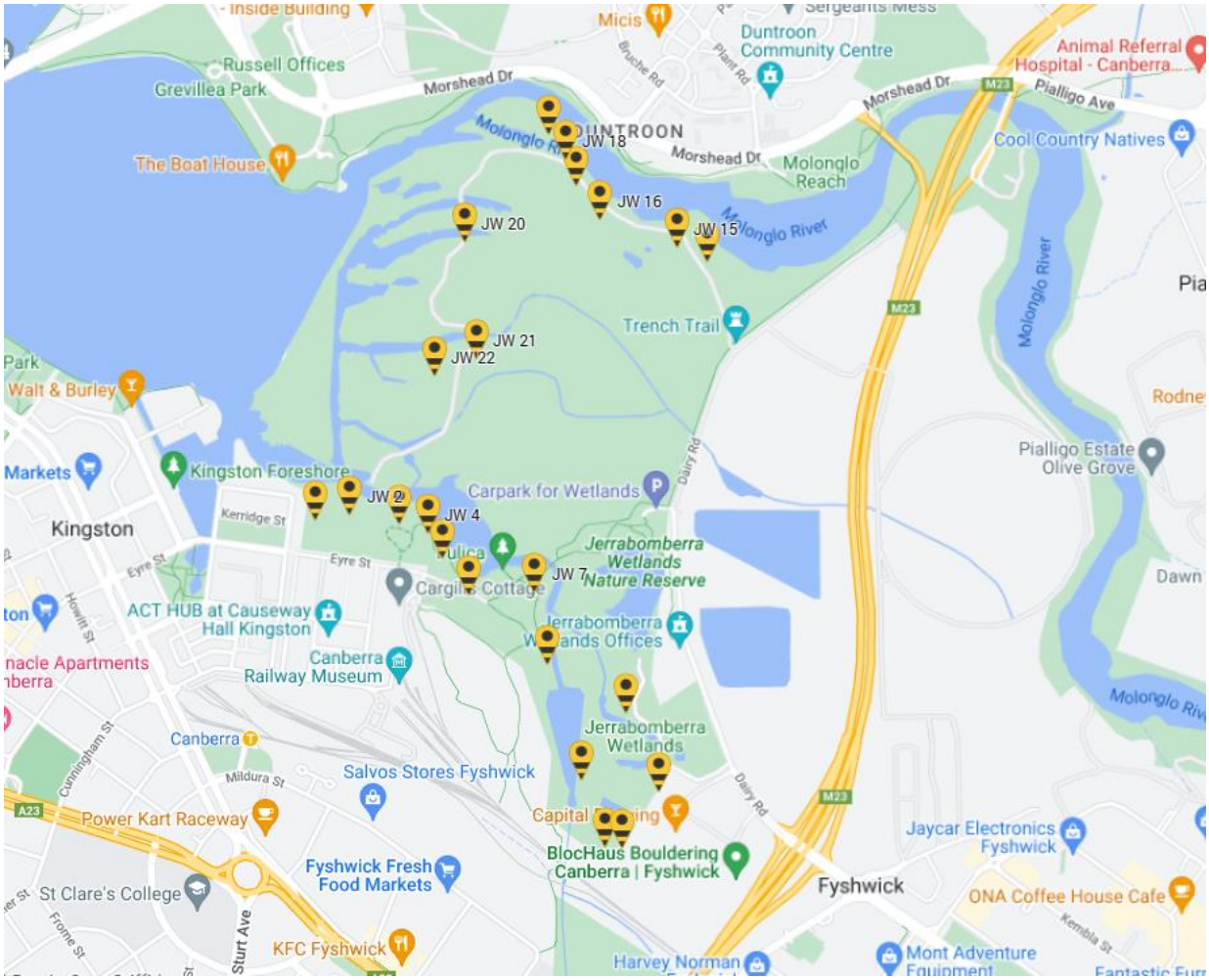
With the combination of dryer and warmer weather conditions forecast, and the data prediction, we believe 2023/2024 may be a peak eWasp season.

Trap JW 4 The Causeway, Jerrabomberra Wetlands Nature Reserve, saw a total of 13% or 66 eWasp spring queens.

Trap Locations

The trapping program was broken up into three (3) areas, locations below. The program ran from 9 October – 25 November 2023.

- Jerrabomberra Wetlands
  The Causeway Traps JW 1 - 8
- Jerrabomberra Wetlands
  Foreshore Traps JW 9 - 13
- Jerrabomberra Wetlands
  Molonglo River Traps JW 14 - 22



eWasp Spring Queen Traps locations at Jerrabomberra Wetlands Nature Reserve.

Program Data

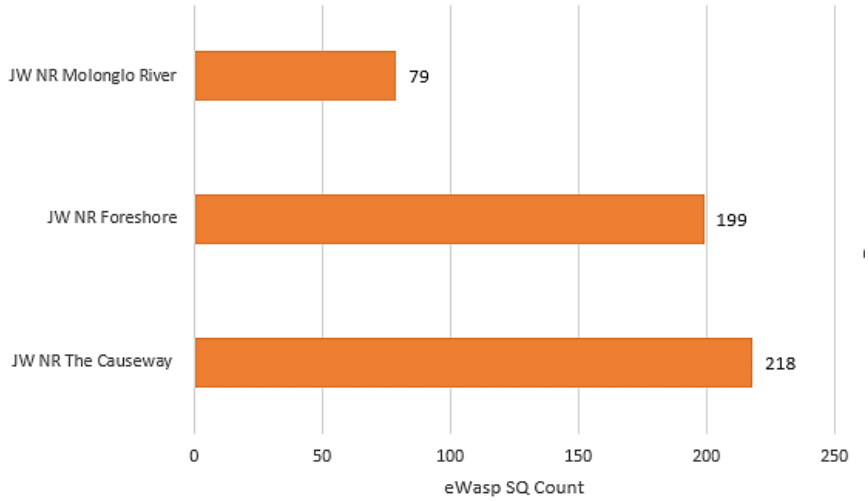
Table 7 shows trap number, set up date, GPS coordinates and location 2023.

Trap Number	Set-up Date	GPS Latitude	GPS Longitude	Location
JW 1	9-Oct-23	-35.31305772	149.1514461	JW NR The Causeway
JW 2	9-Oct-23	-35.31293296	149.152585	JW NR The Causeway
JW 3	9-Oct-23	-35.31316852	149.1541947	JW NR The Causeway
JW 4	9-Oct-23	-35.31342104	149.1551415	JW NR The Causeway
JW 5	9-Oct-23	-35.3140916	149.1556189	JW NR The Causeway
JW 6	9-Oct-23	-35.31505269	149.1564792	JW NR The Causeway
JW 7	9-Oct-23	-35.31499962	149.1586458	JW NR The Causeway
JW 8	9-Oct-23	-35.31695679	149.1590464	JW NR The Causeway
JW 9	9-Oct-23	-35.31691958	149.1590692	JW NR Foreshore
JW 10	9-Oct-23	-35.32178961	149.1609468	JW NR Foreshore
JW 11	9-Oct-23	-35.32181505	149.1615101	JW NR Foreshore
JW 12	9-Oct-23	-35.32029405	149.1627221	JW NR Foreshore
JW 13	9-Oct-23	-35.32000544	149.1601612	JW NR Foreshore
JW 14	9-Oct-23	-35.31821057	149.1616428	JW NR Molonglo River
JW 15	9-Oct-23	-35.30617014	149.1642945	JW NR Molonglo River
JW 16	9-Oct-23	-35.30578599	149.1633065	JW NR Molonglo River
JW 17	9-Oct-23	-35.30502507	149.1607922	JW NR Molonglo River
JW 18	9-Oct-23	-35.30411721	149.1600063	JW NR Molonglo River
JW 19	9-Oct-23	-35.30276854	149.1590877	JW NR Molonglo River
JW 20	9-Oct-23	-35.30569761	149.1563005	JW NR Molonglo River
JW 21	9-Oct-23	-35.30876529	149.1567468	JW NR Molonglo River
JW 22	9-Oct-23	-35.31189551	149.1525381	JW NR Molonglo River

Table 8 shows the total count by location.

Location	Totals
Jerrabomberra Wetlands The Causeway	218
Jerrabomberra Wetlands Foreshore	199
Jerrabomberra Wetlands Molonglo River	79
Grand Total	496

Chart 6 shows the total count by location.



The Causeway had the highest share of eWasp spring queens with 44% or 218, followed by The Foreshore with 40% or 199.

Trap JW 1A The Causeway, Jerrabomberra Wetlands Nature Reserve, saw a total of 64% or 16 eWasp spring queens.

Table 9 shows the total count by location and trap number.

Location & Trap Number	Totals
JW NR The Causeway	**218**
JW 1	5
JW 2	20
JW 3	4
JW 4	66
JW 5	12
JW 6	28
JW 7	22
JW 8	61
JW NR Foreshore	**199**
JW 10	56
JW 11	7
JW 12	75
JW 13	17
JW 9	44
JW NR Molonglo River	**79**
JW 14	3
JW 15	7
JW 16	4
JW 17	21
JW 18	40
JW 19	3
JW 20	0
JW 21	1
JW 22	0
Grand Total	**496**

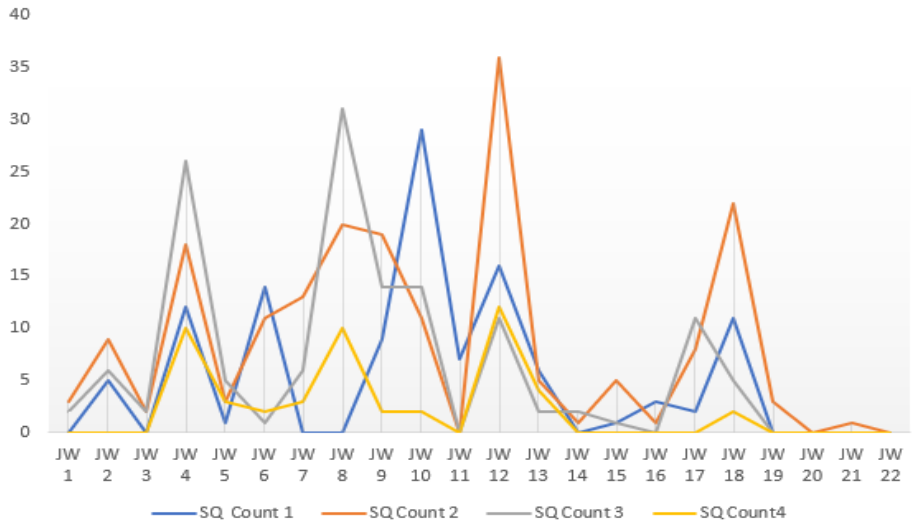
Trap JW 12 had the highest number of eWasp spring queens with 14% or 75.

Table 10 shows the count by trap number and count number.

Trap Number	SQ Count 1	SQ Count 2	SQ Count 3	SQ Count4	Totals
JW 1	0	3	2	0	5
JW 2	5	9	6	0	20
JW 3	0	2	2	0	4
JW 4	12	18	26	10	66
JW 5	1	3	5	3	12
JW 6	14	11	1	2	28
JW 7	0	13	6	3	22
JW 8	0	20	31	10	61
JW 9	9	19	14	2	44
JW 10	29	11	14	2	56
JW 11	7	0	0	0	7
JW 12	16	36	11	12	75
JW 13	6	5	2	4	17
JW 14	0	1	2	0	3
JW 15	1	5	1	0	7
JW 16	3	1	0	0	4
JW 17	2	8	11	0	21
JW 18	11	22	5	2	40
JW 19	0	3	0	0	3
JW 20	0	0	0	0	0
JW 21	0	1	0	0	1
JW 22	0	0	0	0	0
Grand Total	116	**191**	139	50	496

SQ Count 2 had the highest share of eWasp spring queens with 40% or 199.

Chart 7 shows the count by trap number, from the first to the fourth count.



SQ Count 2 had the highest count of eWasp spring queens at Jerrabomberra Wetlands in 2023.

eWasp Reporting

The eWasp mobile app is available free at both app stores.

The eWasp Research Programs & Information Centre monitors the distribution of invasive species through data collection to create programs with the aim of protecting native and endangered species.

eWasp|CoreEnviro Solutions main objective is to save native and endangered species. We are committed to educating the public on invasive and beneficial species, and through education, we believe we have saved numerous native species.

The eWasp mobile app is an easy-to-use GPS mapping tool that allows the user to report a European wasp (eWasp) nest or sighting, honey bee hive or swarm, and coming soon Fire ant nest or sighting by dropping a location pin on public, commercial & residential land.

eWasp Mobile App - eWasp

Reporting via the eWasp app enables us to monitor the distribution of invasive species and conduct research and monitoring programs where needed.

Results by Location

Jerrabomberra Wetlands The Causeway

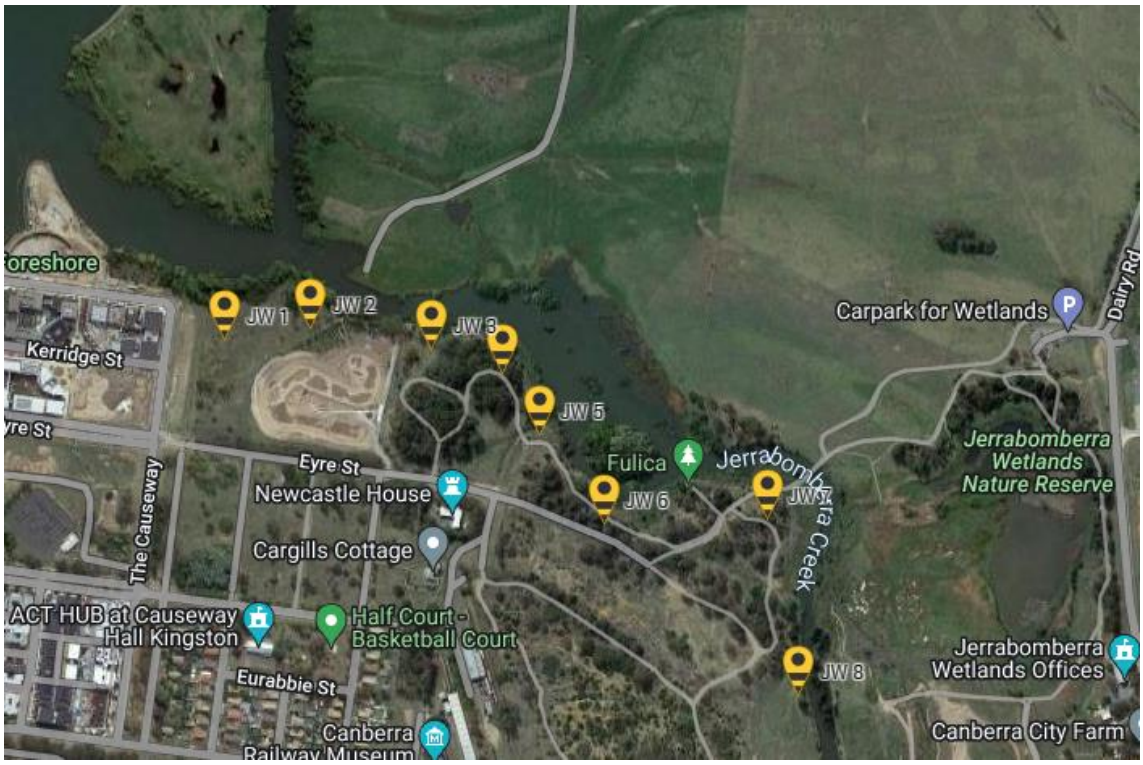
Background

The Causeway, Jerrabomberra Wetlands, is located on Jerrabomberra Creek and is in proximity to the Kingston Foreshore where there are many cafes, restaurants, and other businesses. This location is an entrance point into Jerrabomberra Wetlands and is also a residential area.

2023 eWasp Spring Queen Trap Location

Trap Number	GPS Latitude	GPS Longitude	Location
JW 1	-35.31305772	149.1514461	Jerrabomberra Wetlands The Causeway
JW 2	-35.31293296	149.152585	Jerrabomberra Wetlands The Causeway
JW 3	-35.31316852	149.1541947	Jerrabomberra Wetlands The Causeway
JW 4	-35.31342104	149.1551415	Jerrabomberra Wetlands The Causeway
JW 5	-35.3140916	149.1556189	Jerrabomberra Wetlands The Causeway
JW 6	-35.31505269	149.1564792	Jerrabomberra Wetlands The Causeway
JW 7	-35.31499962	149.1586458	Jerrabomberra Wetlands The Causeway
JW 8	-35.31691958	149.1590692	Jerrabomberra Wetlands The Causeway

Mapped Traps



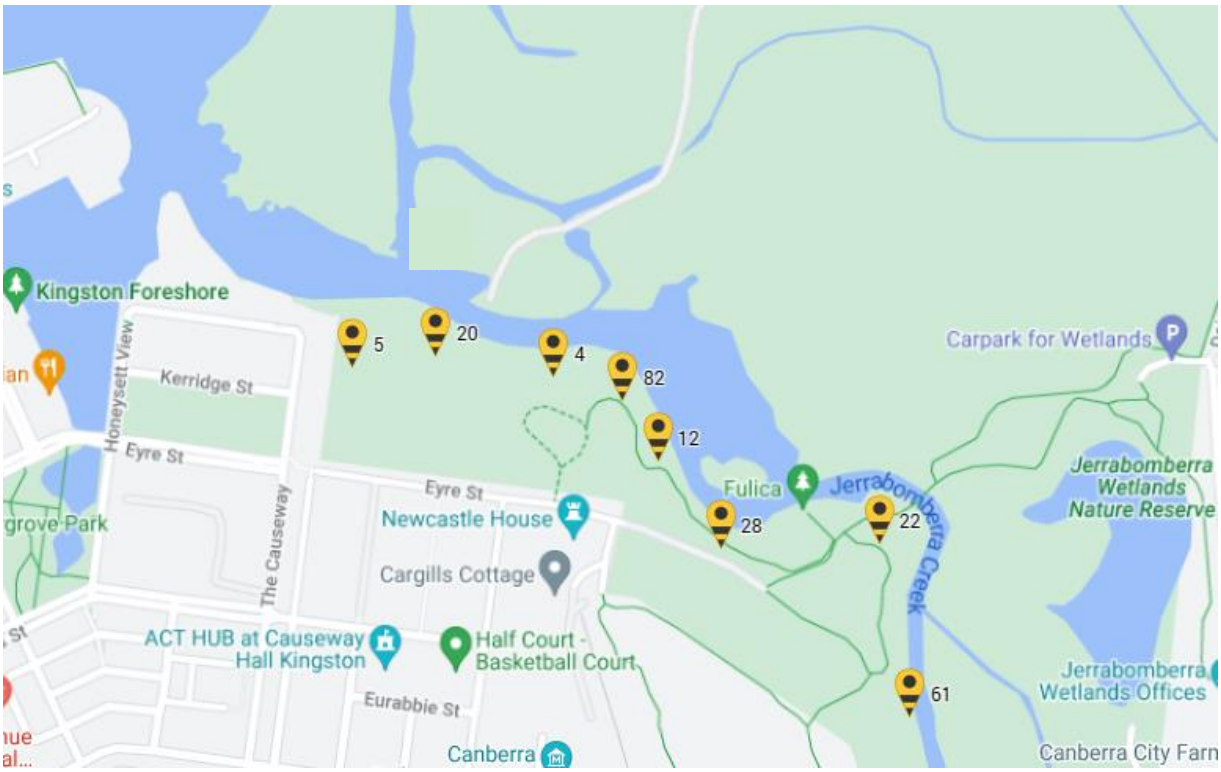
Traps JW 1 to JW 8were deployed at the Causeway, Jerrabomberra Wetlands.

2023 eWasp Spring Queen Count

Trap Number	SQ Count 1	SQ Count 2	SQ Count 3	SQ Count4	Totals
JW 1	0	3	2	0	5
JW 2	5	9	6	0	20
JW 3	0	2	2	0	4
JW 4	12	18	26	10	66
JW 5	1	3	5	3	12
JW 6	14	11	1	2	28
JW 7	0	13	6	3	22
JW 8	0	20	31	10	61
	Total Number Of eWasp Spring Queens				218

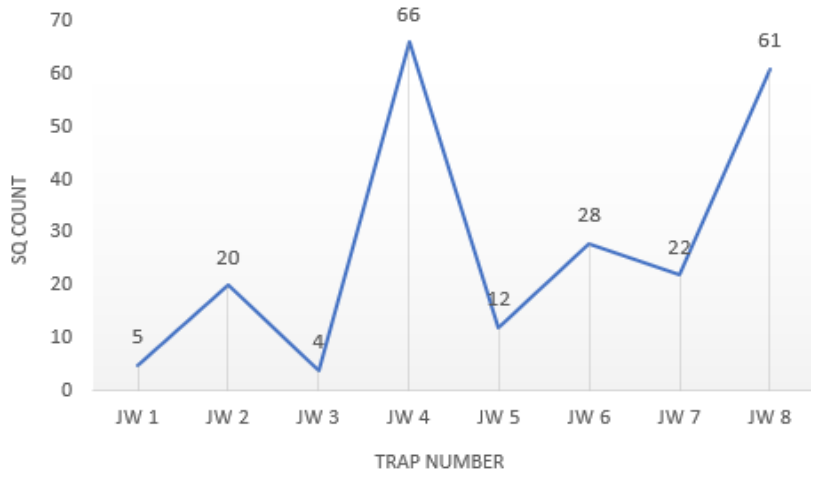
Mapped Counts

Mapped traps with counts.



Results

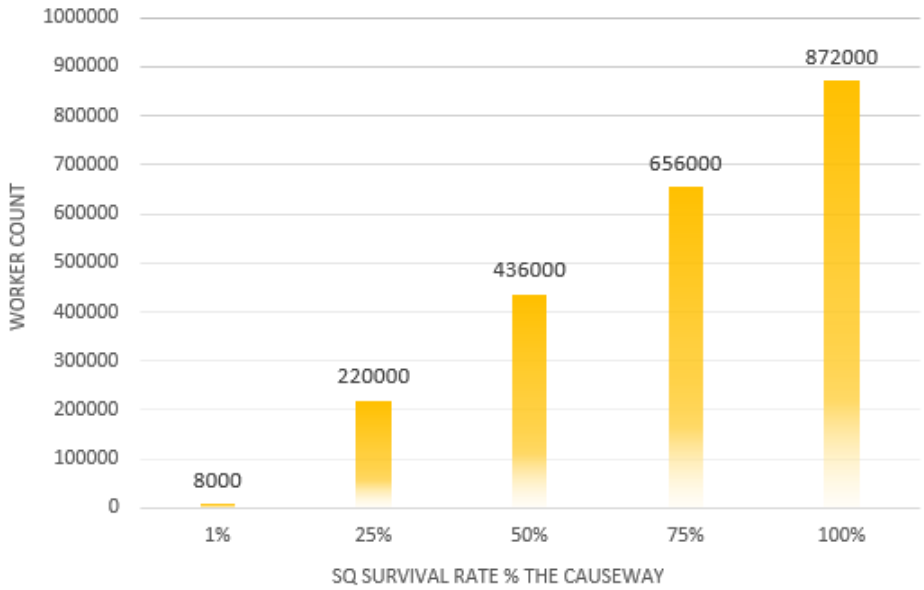
Chart 8 shows the number of eWasp queens by trap number.



There were eight (8) traps deployed at The Causeway, Jerrabomberra Wetlands, which had a total of 218 spring queens trapped and removed from the environment during the program period.

Of the total 218 eWasp spring queens trapped and removed from the environment, JW 4 had the highest count with 30% or 66, followed by JW 8 with 28% or 61.

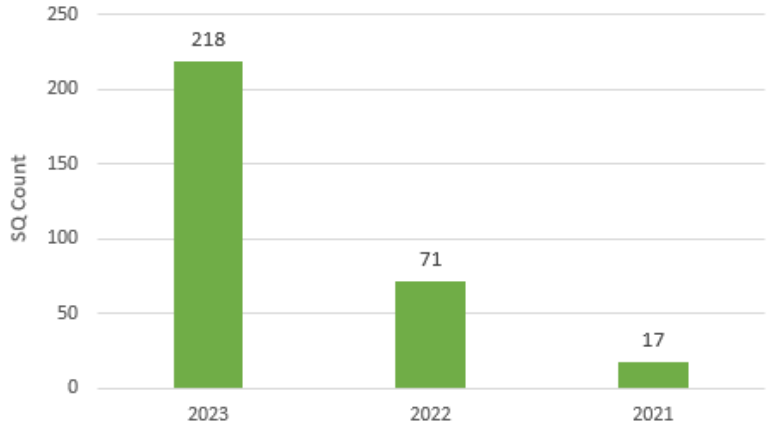
Chart 15 shows the count of workers by spring queen survival rate.



If all queens survived and established nests, there may have been an estimated 872,000 worker wasps and an estimated 65,400 next generation queens impacting the environment and surrounding areas.

Data Comparison

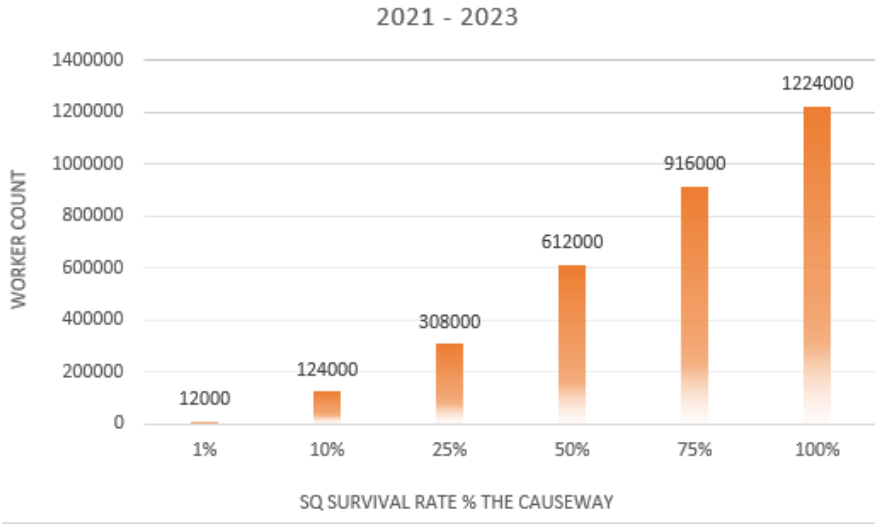
Chart 9 shows the count by year.



Location	2022	2023	Increase/decrease
The Causeway	71	218	207% ↑

The 2022 spring queen trapping program at the Causeway trapped a total of 71 spring queens, in 2023, there were 218 spring queens trapped and removed from the environment, an increase of 207%.

Chart 10 shows the count of workers by SQ survival rate.



From 2021 to 2023, 306 eWasp spring queens have been removed from the area, if all queens survived and established nests, there may have been an estimated 1,224,000 worker wasps, and an estimated 91,800 next generation queens impacting the environment and surrounding areas.

Jerrabomberra Wetlands Foreshore

Background

Jerrabomberra Wetlands Foreshore has an entrance to Jerrabomberra Wetlands, it is also an area occupied by various businesses such as cafes, bars, restaurants, and industrial/trade businesses.

2023 eWasp Spring Queen Location

Trap Number	GPS Latitude	GPS Longitude	Location
JW 9	-35.32178961	149.1609468	Jerrabomberra Wetlands Foreshore
JW 10	-35.32181505	149.1615101	Jerrabomberra Wetlands Foreshore
JW 11	-35.32029405	149.1627221	Jerrabomberra Wetlands Foreshore
JW 12	-35.32000544	149.1601612	Jerrabomberra Wetlands Foreshore
JW 13	-35.31821057	149.1616428	Jerrabomberra Wetlands Foreshore

Mapped Traps

Traps JW 9 to JW 13 were deployed at the Jerrabomberra Wetlands Foreshore.

2023 eWasp Spring Queen Count

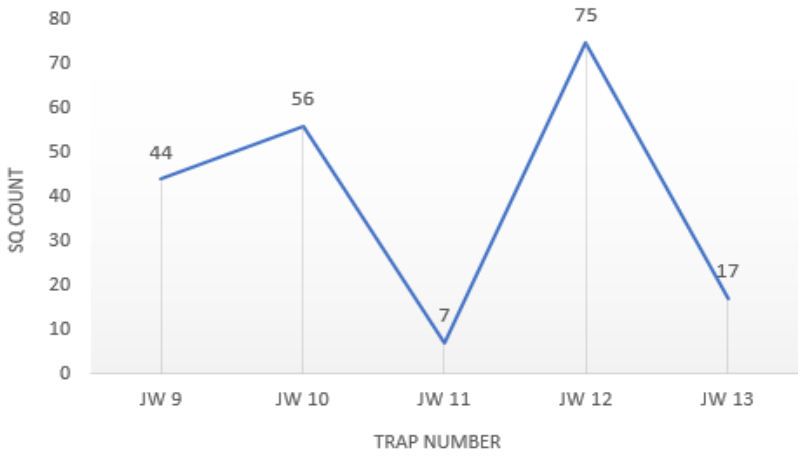
Trap Number	SQ Count 1	SQ Count 2	SQ Count 3	SQ Count4	Totals
JW 9	9	19	14	2	44
JW 10	29	11	14	2	56
JW 11	7	0	0	0	7
JW 12	16	36	11	12	75
JW 13	6	5	2	4	17
	Total Number of eWasp Spring Queens				199

Mapped Counts

Mapped traps with eWasp spring queen counts.

Results

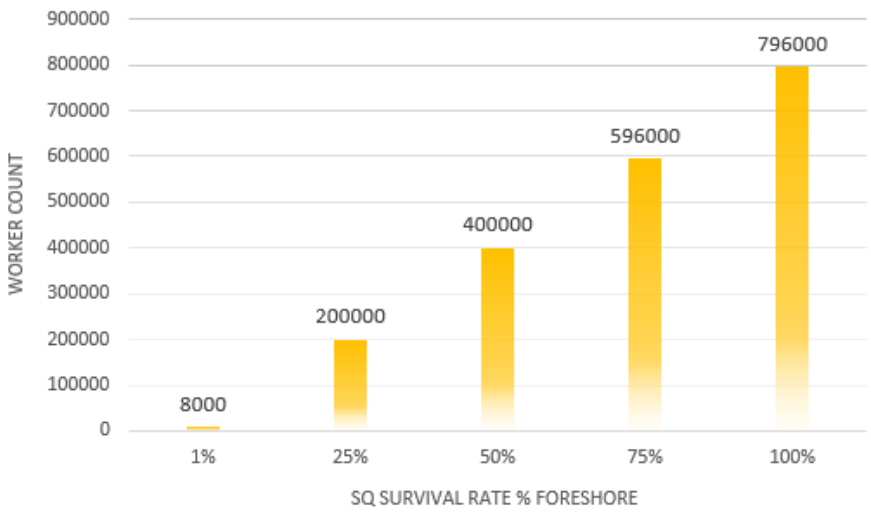
Chart 11 shows the total count by trap number.



There were five (5) traps deployed at Jerrabomberra Wetlands Foreshore, which had a total of 199 spring queens trapped and removed from the environment during the program period.

Of the total 199 eWasp spring queen trapped and removed from the environment, W12 had the highest count with 38% or 75, followed by JW 10 with 28% or 56.

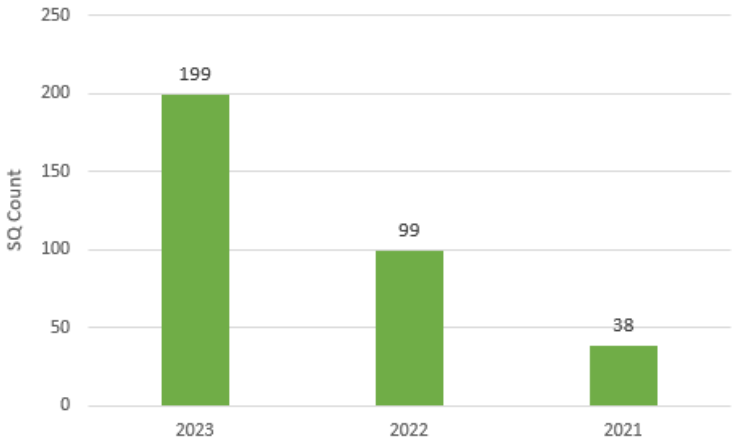
Chart 15 shows the count of workers by spring queen survival rate.



If all queens survived and established nests, there may have been an estimated 796,000 worker wasps and an estimated 29,700 next generation queens impacting the environment and surrounding areas.

Data Comparison

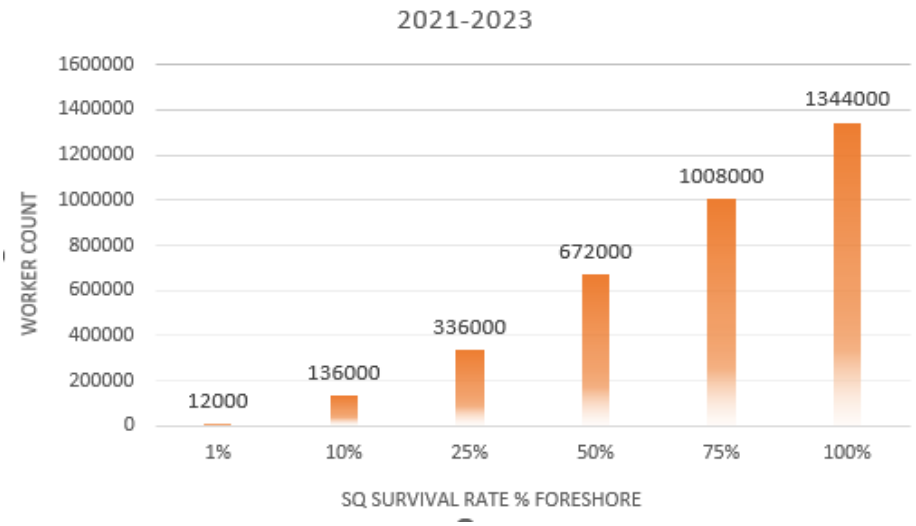
Chart 12 shows the number of eWasp queens by year.



Location	2022	2023	Increase/decrease
Jerrabomberra Wetlands Foreshore	99	199	101%

The 2022 spring queen trapping program had a total of 99 queens, the 2023 program had 199 queens removed from the environment, a total increase of 160% for Jerrabomberra Wetlands Foreshore, ACT.

Chart 13 shows the count of workers by SQ survival rate.



From 2021 – 2023, 336 eWasp spring queens have been removed from the area, if all queens survived and established nests, there may have been an estimated 1,344,000 worker wasps, and an estimated 100,800 next generation queens impacting the environment and surrounding areas.

Trap JW 1A The Foreshore, Jerrabomberra Wetlands Nature Reserve, saw a total of 11% or 56 eWasp spring queens.

Jerrabomberra Wetlands Molonglo River

Background

Jerrabomberra Wetlands Molonglo River is home to the historical Trench Trails. This location is utilised by farmers for grazing cattle. The river corridor is utilised by the public for water activities, and across the river, there are BBQ amenities, walking and cycling paths.

2023 eWasp Spring Queen Location

Trap Number	GPS Latitude	GPS Longitude	Location
JW 14	-35.30617014	149.1642945	Jerrabomberra Wetlands Molonglo River
JW 15	-35.30578599	149.1633065	Jerrabomberra Wetlands Molonglo River
JW 16	-35.30502507	149.1607922	Jerrabomberra Wetlands Molonglo River
JW 17	-35.30411721	149.1600063	Jerrabomberra Wetlands Molonglo River
JW 18	-35.303407	149.159805	Jerrabomberra Wetlands Molonglo River
JW 19	-35.30276854	149.1590877	Jerrabomberra Wetlands Molonglo River
JW 20	-35.30569761	149.1563005	Jerrabomberra Wetlands Molonglo River
JW 21	-35.30876529	149.1567468	Jerrabomberra Wetlands Molonglo River
JW 22	-35.31189551	149.1525381	Jerrabomberra Wetlands Molonglo River

Mapped Traps

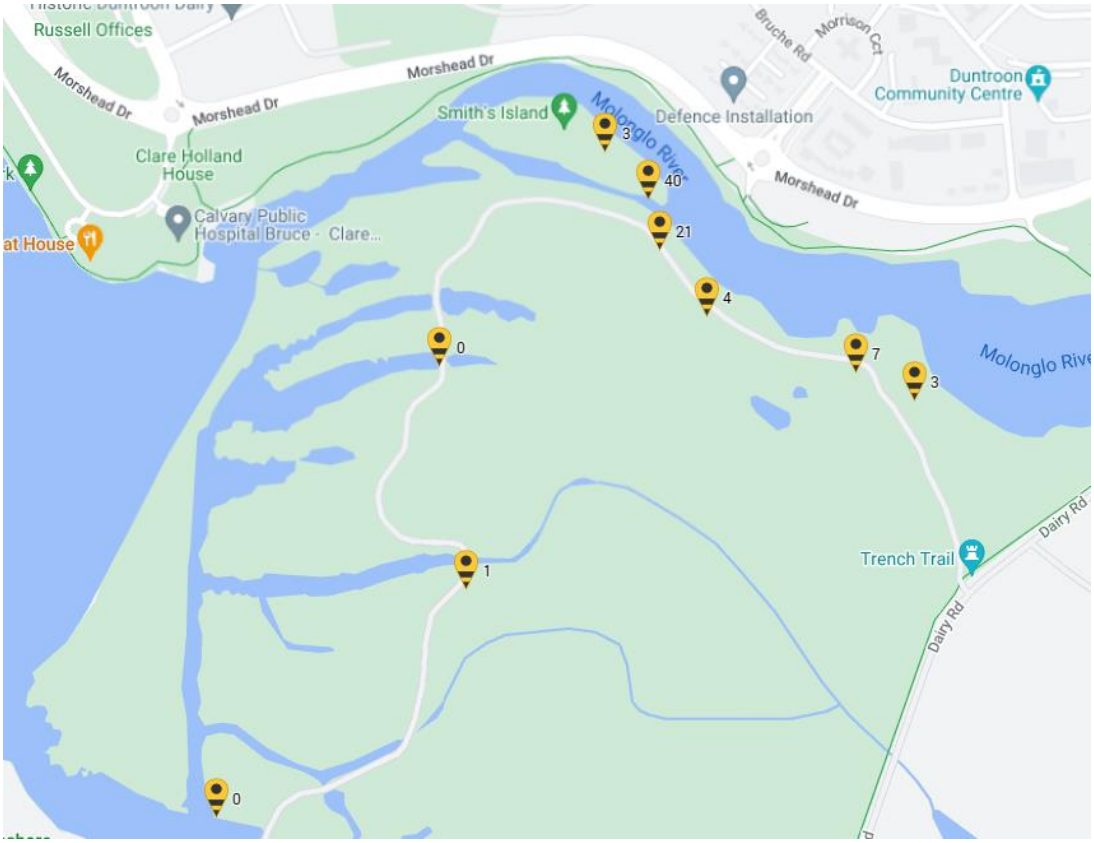
Traps JW 14 to JW 22 were deployed at the Jerrabomberra Wetlands Molonglo River. Trap JW 22 was relocated on the 4 November 2023.

2023 eWasp Spring Queen Count

Trap Number	SQ Count 1	SQ Count 2	SQ Count 3	SQ Count4	Totals
JW 14	0	1	2	0	3
JW 15	1	5	1	0	7
JW 16	3	1	0	0	4
JW 17	2	8	11	0	21
JW 18	11	22	5	2	40
JW 19	0	3	0	0	3
JW 20	0	0	0	0	0
JW 21	0	1	0	0	1
JW 22	0	0	0	0	0
	Total Number of eWasp Spring Queens				79

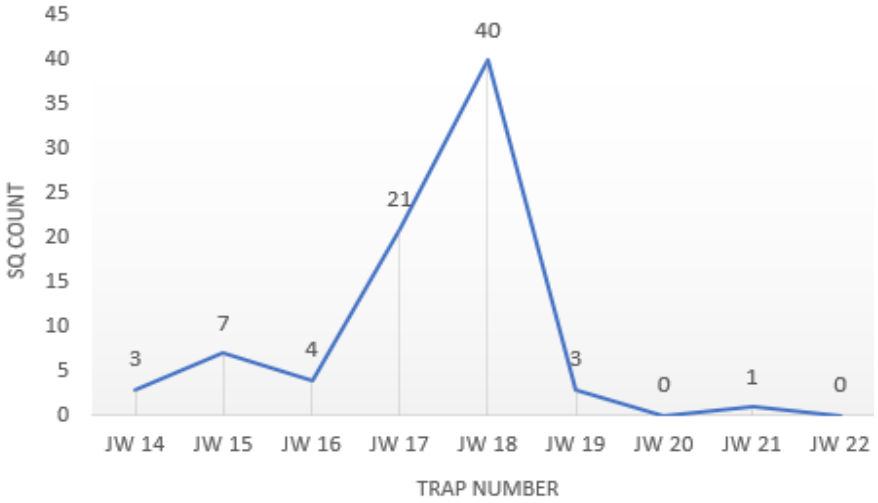
Mapped Counts

Mapped traps with eWasp spring queen counts.



Results

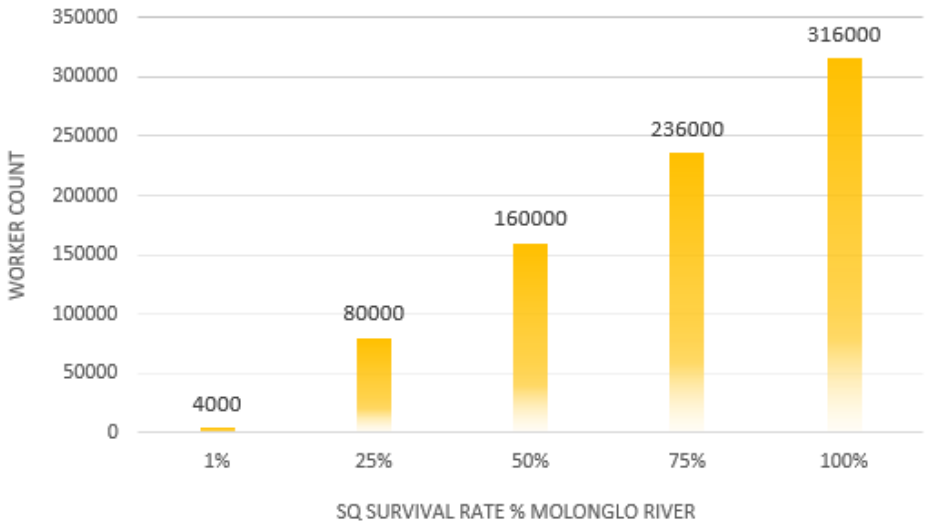
Chart 14 shows the number of eWasp queens by trap number.



There were nine (9) traps deployed at Jerrabomberra Wetlands Molonglo River, which had a total of 79 spring queens trapped and removed from the environment during the program period.

Of the total 79 eWasp spring queens trapped and removed from the environment, JW 18 had the highest count with 51% or 40, followed by JW 17 with 27% or 21.

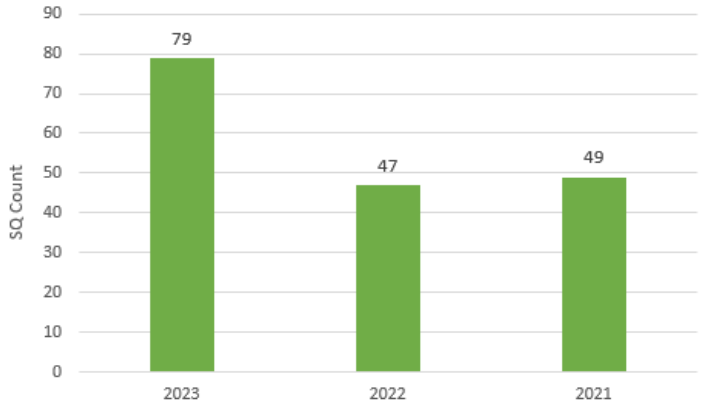
Chart 15 shows the count of workers by spring queen survival rate.



If all queens survived and established nests, there may have been an estimated 316,000 worker workers, and an estimated 23,700 next generation queens impacting the environment and surrounding areas.

Data Comparison

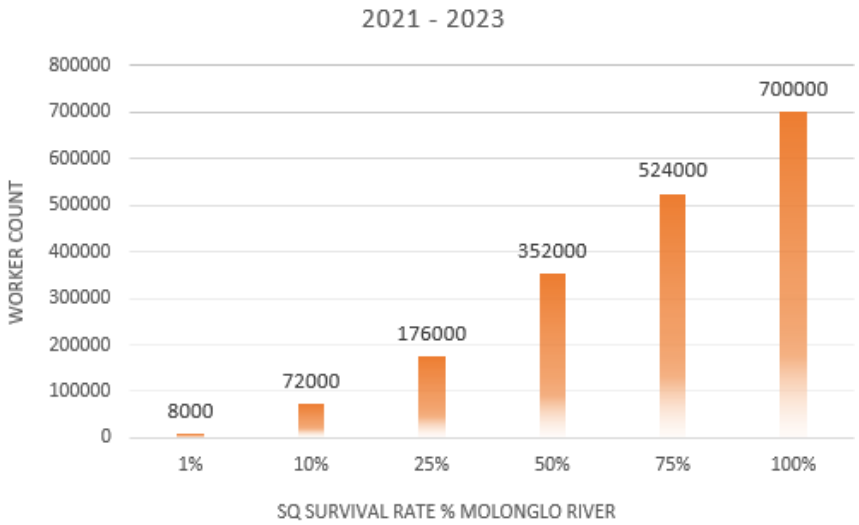
Chart 15 shows the total count by year.



Location	2022	2023	Increase/decrease
Jerrabomberra Wetlands Molonglo River	47	79	68% ↑

The 2022 spring queen trapping program had a total of 47 queens, the 2023 program had 79 queens removed from the environment, a total increase of 68% for Jerrabomberra Wetlands Molonglo River, ACT.

Chart 16 shows the count of workers by SQ survival rate.



From 2021 - 2022, 175 eWasp spring queens have been removed from the area, if all queens survived and established nests, there may have been an estimated 700,000 worker wasps, and an estimated 52,500 next generation queens impacting the environment and surrounding areas.

Recommendations

From late January to March 2024, the eWasp population and activity should be high and noticeable, therefore, an inspection to identify and treat nests in Jerrabomberra Wetlands Nature Reserve is recommended. This will prevent spring queens from emerging in spring 2024 and establishing nests.

A follow up eWasp spring queen trapping program in 2024 is recommended for Jerrabomberra Wetlands Nature Reserve.

It is recommended that 3-4 spring queen traps be deployed to monitor queen activity, prior to deploying all traps.

During the 2023 program, there 14 eWasp workers trapped and removed from the environment, this indicates there is nest activity in the reserve.

If eWasp activity is high in January to early February, and nests cannot be located, a baiting program may be required.

Report all nest and significant sightings to the eWasp team, this enables us to monitor the distribution of eWasps at Jerrabomberra Wetlands Nature Reserve.

Trap JW 12 The Foreshore, Jerrabomberra Wetlands Nature Reserve, saw a total of 64% or 16 eWasp spring queens.

WEATHER OBSERVATIONS BOM

October 2023 Daily Weather Observations, Canberra, ACT

Canberra, Australian Capital Territory
October 2023 Daily Weather Observations
Observations from Canberra Airport.

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Su	3.5	29.7	0			W	76	14:21	17.7	48		W	7	1013.6	29.1	15		WNW	44	1009.1
2	Mo	7.0	27.5	0			N	26	13:42	13.9	73	8	ENE	15	1022.4	25.6	42		N	13	1018.3
3	Tu	11.8	26.7	0			N	69	08:34	24.1	37	1	NNW	41	1015.9	25.3	27		NW	35	1014.1
4	We	14.3	19.9	0			N	74	11:42	16.4	71	8	N	4	1011.0	16.4	79	8	N	37	1005.2
5	Th	6.8	14.0	20.4			NW	56	01:29	7.8	86	7	NW	30	1013.7	10.7	59	8	WNW	28	1017.2
6	Fr	5.3	18.7	0.2			ENE	39	17:03	10.5	75	3	NNW	15	1024.9	16.9	47	8	S	7	1024.2
7	Sa	0.1	18.1	0			E	37	18:49	8.4	56		S	17	1031.9	17.0	33		NNW	9	1028.5
8	Su	3.2	19.5	0			N	35	15:11	10.8	69		SW	7	1032.4	18.8	42		NNW	17	1027.9
9	Mo	0.6	23.2	0			NW	48	15:19	9.6	85		NE	2	1026.5	22.1	31		N	20	1022.1
10	Tu	5.0	21.7	0			E	39	18:19	13.6	77	8	NNW	6	1023.5	20.6	36		N	13	1020.3
11	We	5.6	23.5	0			NW	39	15:05	12.6	84	8	SSE	6	1024.6	22.1	35		NNW	24	1021.5
12	Th	1.6	26.7	0			NNW	76	12:31	11.5	71			Calm	1017.9	25.7	31	3	NW	43	1008.9
13	Fr	4.8	17.1	5.0			NW	57	12:17	10.5	65		NW	20	1017.4	16.1	51		WNW	35	1016.4
14	Sa	8.7	19.5	0			W	57	12:53	13.2	72	5	NNW	28	1017.7	19.2	46	6	NW	31	1014.9
15	Su	0.1	18.1	0			NW	41	12:43	10.6	73		WNW	7	1018.3	16.4	55	8	NW	24	1015.1
16	Mo	8.5	15.5	0			NW	52	09:00	12.3	66	8	NW	24	1011.2	11.9	54	6	NW	9	1012.8
17	Tu	-0.3	18.2	7.0			SSW	39	12:47	8.5	75	4	S	20	1027.5	16.9	39	1	SSW	22	1027.5
18	We	4.9	22.0	0			NNE	28	15:11	12.0	59	1	SSE	11	1030.6	20.7	45		NNE	11	1026.9
19	Th	5.6	24.6	0			NW	26	14:08	12.0	69	1	SSW	7	1026.3	23.3	31		NW	11	1019.9
20	Fr	4.3	26.4	0			N	35	17:16	14.2	77		W	6	1019.8	25.6	33		WNW	17	1015.8
21	Sa	6.2	29.1	0			NNW	52	15:16	17.9	61		S	6	1016.8	28.1	28	8	NNW	31	1011.5
22	Su	10.5	19.2	0			NW	54	12:58	13.5	40		NNW	26	1011.2	17.1	41	8	NW	35	1011.2
23	Mo	9.5	22.4	0			NNW	50	14:26	13.3	53		WNW	22	1014.6	21.9	36		NNW	33	1012.1
24	Tu	3.0	25.5	0			NW	50	15:08	14.4	62		NNW	7	1014.9	24.6	19		NW	31	1010.9
25	We	10.7	19.8	0			NNW	54	11:16	16.1	39		NNW	26	1012.6	18.3	20		WNW	28	1012.7
26	Th	-1.1	18.3	0			SSW	48	15:13	8.8	45		S	24	1023.4	17.3	26		S	28	1021.4
27	Fr	0.5	18.3	0			ESE	35	11:24	10.8	47	1	SSE	17	1031.4	15.6	32	4	SE	19	1029.1
28	Sa	2.7	20.6	0			NNW	35	14:48	10.5	67	8	S	9	1029.9	18.4	31		N	13	1024.8
29	Su	0.6	25.5	0			WNW	50	11:58	12.7	55		ENE	6	1021.7	23.6	22		W	19	1016.3
30	Mo	4.9	26.1	0			NW	69	09:59	17.7	33		WSW	9	1011.7	23.2	23	8	NW	35	1008.9
31	Tu	8.2	22.0	0			WNW	48	08:30	14.0	44		W	31	1012.6	20.9	15		WSW	20	1013.6
Statistics for October 2023																					
Mean		5.1	21.9							12.9	62	5		14	1020.3	20.3	36	6		23	1017.4
Lowest		-1.1	14.0							7.8	33	1		Calm	1011.0	10.7	15	1	S	7	1005.2
Highest		14.3	29.7	20.4			#	76		24.1	86	8	NNW	41	1032.4	29.1	79	8	WNW	44	1029.1
Total				32.6																	

Observations were drawn from Canberra Airport (station 070351)
Some cloud observations are from automated equipment; these are somewhat different to those made by a human observer and may not appear every day.

IDCJDW2801.202310 Prepared at 13:00 UTC on 14 Nov 2023
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http://www.bom.gov.au/climate/dwo/IDCJDW0000.pdf

November 2023 Daily Weather Observations, Canberra, ACT

Canberra, Australian Capital Territory
November 2023 Daily Weather Observations
Observations from Canberra Airport.

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	We	3.9	22.9	0			ENE	41	17:19	13.3	57	2	SSW	7	1020.7	20.6	26		E	19	1017.5
2	Th	4.0	24.1	0			NE	39	18:05	13.4	61	7	SSW	7	1021.7	22.2	33		ENE	9	1016.8
3	Fr	10.3	25.0	0			E	43	16:07	14.9	64	6	NE	17	1019.1	23.2	33	2	NE	11	1014.6
4	Sa	11.6	15.8	0.6			ESE	41	19:09	14.7	75	8	ESE	15	1021.2	14.6	70	8	E	20	1021.2
5	Su	11.2	19.3	0			ENE	39	13:54	14.2	70	7	ESE	17	1026.5	16.6	59	8	ENE	28	1024.9
6	Mo	9.0	25.4	0			E	41	18:42	14.4	65	7	N	11	1025.4	23.5	32		S	9	1020.0
7	Tu	7.8	27.4	0.2			NNW	43	11:20	16.0	60		NW	6	1021.7	27.0	31	7	WNW	19	1016.7
8	We	9.4	27.1	0			N	46	14:58	18.0	68	7	N	4	1018.5	24.8	36	8	NNW	24	1014.5
9	Th	10.4	21.7	0			W	39	09:19	18.4	65	8	SE	11	1016.5	16.7	86	8	NNW	11	1015.0
10	Fr	8.1	28.9	6.8			NNW	35	15:24	17.5	72		NNW	7	1017.7	26.0	34	2	NW	17	1014.6
11	Sa	9.3	33.3	0			NW	50	11:48	20.1	70		N	7	1018.2	32.8	28	3	NW	30	1013.9
12	Su	14.0	31.7	0.6			NW	54	14:44	22.9	61	2	N	17	1015.5	30.6	10		WNW	31	1012.5
13	Mo	10.2	27.3	0			ENE	37	18:03	15.7	65	8	WSW	11	1018.1	25.0	28		NNW	9	1014.1
14	Tu	6.3	24.1	0			NNW	31	13:53	15.3	73	7	NW	4	1014.4	21.8	31	7	NNW	24	1012.7
15	We	10.6	27.0	0.2			NW	44	13:32	16.9	72	8	ENE	9	1013.1	26.1	36		NW	17	1009.3
16	Th	7.4	26.1	0			NNW	43	14:21	16.3	74	7	NNW	6	1010.1	24.8	28	8	WNW	26	1007.8
17	Fr	10.5	24.0	0			E	44	19:02	13.8	48		S	26	1017.4	21.9	25		WSW	15	1015.8
18	Sa	6.0	27.9	0			NW	35	15:07	15.7	64		W	7	1020.4	26.4	25		NE	11	1016.2
19	Su	8.1	31.4	0			NW	46	12:12	19.6	60		SSE	2	1019.3	29.0	20	1	NW	24	1016.1
20	Mo	16.0	28.5	0			S	59	15:46	21.7	56	8	NNW	17	1019.5	26.3	37	8	NNW	22	1016.1
21	Tu	10.5	26.4	22.6			ESE	39	17:59	17.0	75	7	SSW	6	1020.7	26.4	42	8	WSW	13	1017.0
22	We	11.0	27.7	0.2			ENE	39	16:09	18.0	62	7	SSE	15	1022.2	27.6	39	6	SE	15	1018.6
23	Th	10.9	24.2	0			ESE	50	13:33	19.7	59	5	SSE	19	1023.7	21.6	60	6	ESE	24	1022.7
24	Fr	13.8	22.0	0			E	33	12:28	18.3	70	8	SE	13	1022.3	20.7	64	8	E	17	1018.5
25	Sa	16.6	27.1	32.2			WSW	46	16:26	17.5	99	7	N	9	1014.4	25.1	51	3	N	20	1009.5
26	Su	12.8	26.4	2.0			WNW	54	11:51	19.4	71	1	NNW	19	1010.7	25.0	35	1	W	24	1009.2
27	Mo	12.8	27.6	0			E	48	18:09	19.9	65	3	E	7	1013.1	26.4	31	6	WNW	15	1010.7
28	Tu	16.1	22.1	0			NE	37	12:48	19.1	73	8	E	13	1014.7	17.2	96	8	ENE	13	1012.6
29	We	13.8	19.8	44.8			NW	28	12:08	15.5	99	8	SSW	9	1005.3	16.2	99	4	SSE	9	1003.1
30	Th	13.7	22.7	24.0			S	37	10:03	17.7	66	8	W	17	1002.0	20.8	58	8	SW	13	1001.5
Statistics for November 2023																					
Mean		10.5	25.5							17.2	67	6		11	1017.5	23.6	42	5		17	1014.5
Lowest		3.9	15.8							13.3	48	1	SSE	2	1002.0	14.6	10	1	#	9	1001.5
Highest		16.6	33.3	44.8			S	59		22.9	99	8	S	26	1026.5	32.8	99	8	WNW	31	1024.9
Total				134.2																	

Observations were drawn from Canberra Airport (station 070351)
Some cloud observations are from automated equipment; these are somewhat different to those made by a human observer and may not appear every day.

IDCJDW2801.202311 Prepared at 13:00 UTC on 7 Dec 2023
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December 2023 Daily Weather Observations, Canberra, ACT

Canberra, Australian Capital Territory
December 2023 Daily Weather Observations
Observations from Canberra Airport.

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Fr	14.1	24.0	9.2			SSW	33	12:13	17.1	81	8	S	17	1007.0	20.9	59	8	S	13	1004.4
2	Sa	12.4	25.4	11.8			WNW	52	14:30	16.9	84	8	E	9	1008.5	23.7	48	5	NNW	11	1005.9
3	Su	7.6	23.3	0.2			W	48	14:31	16.7	68		WSW	4	1013.5	21.5	48	8	WSW	11	1012.0
4	Mo	8.9	26.8	6.0			NW	30	14:55	14.8	81	8	WNW	4	1018.7	25.4	34		NW	11	1015.0
5	Tu	10.1	32.4	0			WNW	48	14:08	20.6	64		NW	4	1017.0	31.6	25		WNW	33	1013.4
6	We	11.8	32.4	0			W	48	14:39	23.9	48		SSE	7	1016.2	31.9	23		WNW	31	1014.1
7	Th	11.2	31.1	0			SW	52	14:26	17.0	91	8	E	7	1017.3	28.9	27	8	SW	30	1017.0
8	Fr	15.4	33.0	0			NW	83	19:00	22.9	56	8	ENE	2	1018.3	30.5	38	5	SW	11	1013.2
9	Sa	16.2	34.8	3.8			N	59	16:01	21.5	93	7	SSW	7	1012.7	33.9	33		W	13	1010.4
10	Su	17.6	26.7	0.2			ENE	30	09:03	20.2	73	8	ENE	9	1019.5	25.4	60	1	E	11	1016.3
11	Mo	16.8	30.8	0			ESE	41	17:10	22.7	70		SE	2	1017.3	30.4	44		SE	13	1016.3
12	Tu	18.8	30.0	0			E	37	18:30	23.6	66	4	E	15	1019.8	28.9	45	3	NNE	15	1015.7
13	We	16.5	32.5	0			N	59	19:06	21.9	72	8	E	7	1015.2	31.2	33		NNW	24	1010.1
14	Th	17.2	28.4	0			NW	61	13:41	22.6	72	6	NW	33	1006.7	27.7	36	2	WNW	31	1004.5
15	Fr	9.2	28.6	0			W	48	14:34	20.3	63		NW	7	1009.9	27.0	34	3	WNW	30	1006.5
16	Sa	7.1	25.7	0			W	67	09:19	21.3	32		W	30	1005.5	24.4	27	2	WNW	28	1005.7
17	Su	10.9	27.7	0			ENE	39	17:46	18.4	69	1	SW	9	1014.1	26.5	28		N	13	1011.0
18	Mo	13.4	29.6	0			NNW	39	12:43	20.2	68	4	WNW	9	1014.5	28.8	33		NNW	20	1010.9
19	Tu	16.3	34.0	0			N	87	14:12	23.8	67		S	7	1010.7	27.2	41	8	NNE	35	1006.2
20	We	12.9		14.8						12.9	97	8	SSE	13	1014.9						
Statistics for the first 20 days of December 2023																					
Mean		13.2	29.3							20.0	70	6		10	1013.9	27.7	37	4		20	1011.0
Lowest		7.1	23.3							12.9	32	1	#	2	1005.5	20.9	23	1	#	11	1004.4
Highest		18.8	34.8	14.8			N	87		23.9	97	8	NW	33	1019.8	33.9	60	8	NNE	35	1017.0
Total				46.0																	

Observations were drawn from Canberra Airport {station 070351}
Some cloud observations are from automated equipment; these are somewhat different to those made by a human observer and may not appear every day.

IDCJDW2801.202312 Prepared at 00:36 UTC on 20 Dec 2023
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Weather statistics provided by the Bureau of Meteorology, Australian Government.

VESPEX EUROPEAN WASP LURE

VESPEX®

european wasp lure

A versatile tool in European Wasp management.

TECHNICAL BULLETIN

ECO FRIENDLY NON TOXIC

NUMBER 26

WHAT IS VESPEX EUROPEAN WASP LURE?

VESPEX European Wasp Lure is a specially formulated, nontoxic liquid lure which is attractive to European Wasps (*Vespula germanica*) throughout all stages of their lifecycle, including newly emerging queens in Spring.

HOW TO USE

VESPEX European Wasp Lure has been developed to use in two versatile ways; for use in bottle/bag/dome traps, and remote baiting of European wasp nests.

VESPEX DOMINATOR BOTTLE TRAP

VESPEX European Wasp Lure is ideal for use in suitable bottle, bag or dome traps. During development of the liquid lure, testing was conducted in the field using a variety of bottle, dome and bag traps commercially available. Efficiency of tested traps was vastly variable between designs.

As a result Sundew Solutions sought to bring to the market a trap that had the attributes of the successful design elements of others, while incorporating innovative features that took advantage of the habits of European wasps and their foraging behaviours. The result was the **VESPEX Dominator™ Bottle Trap**.

TRAPPING WITH VESPEX EUROPEAN WASP LURE

Using **VESPEX Lure** with the **Dominator Bottle Traps** is a versatile tool when targeting European wasps. Used together they are valuable for:

- Monitoring population distribution spread
- Measuring pest pressure
- Spring trapping of queens to reduce nesting
- Weakening of colony worker numbers
- Environmentally friendly trapping option
- Chemical free option for sensitive areas

WHERE TO SET TRAPS

Correct positioning of traps is essential to the success of consistently trapping European wasps in significant numbers.

The best positioning for traps is in open direct sunlight areas where wasp activity is high.

Do not position traps amongst foliage just because you observe wasps feeding in these locations.

If European wasps are observed in a location and the traps are not trapping wasps within 3 days of deployment, it is recommended to relocate the trap/s in an alternative open space and repeat the process until capture occurs.

HOW LONG DOES IT LAST?

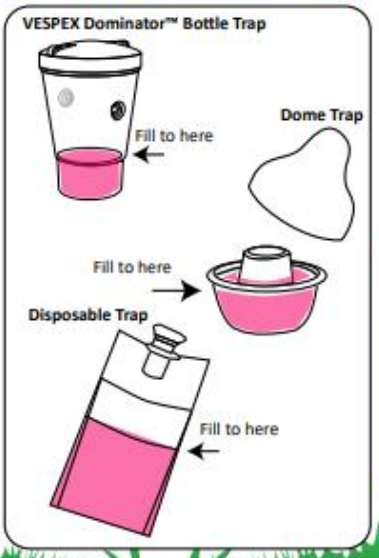
VESPEX European Wasp Lure must be replaced every 14 days or when levels drop due to evaporation. Inspect the trap regularly and remove dead insects.

If the trap is full and there is no free liquid, remove the contents and rinse with clean water before refilling with **VESPEX European Wasp Lure**.

NOT ATTRACTIVE TO BEES

When used as directed, **VESPEX European Wasp Lure** is not attractive to bees. The product contains volatiles which mask the lure and make it unattractive. It is critical that the directions for use are followed.

Better Performance. Better Value.



PRODUCT SPECIFICATIONS

Name: VESPEX European Wasp Lure

Formulation type: Liquid lure

Schedule: Nonpoisonous - unscheduled

Pack sizes: - 250 mL foil pouch, and
- 5 L Jerry pack

Market segments: For use in bottle, bag or suitable insect traps to lure wasps into the station where they are unable to escape and drown in the liquid lure.

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sundew PROFESSIONAL SOLUTIONS

A family owned 100% Australian business.

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