

MIDGE MANAGEMENT STRATEGY PARTNERSHIP AGREEMENT 2020 - 2025

1.0 BACKGROUND

The Yellagonga Regional Park contains a wetland system that includes Lake Goollelal, Walluburnup Swamp, Beenyup Swamp and Lake Joondalup.

In 1999, residents living in the vicinity of Lake Joondalup experienced significant numbers of adult midge. This event led to the establishment of a formal agreement between the Department of Environment and Conservation (now known as the Department of Biodiversity, Conservation and Attractions), the City of Wanneroo and the City of Joondalup, for the management of midge.

Lake Goollelal was added as part of a formal agreement between all three agencies in 2010, although an informal arrangement for managing midge at Lake Goollelal had existed since 2007.

Nuisance midge swarms may have been attributed to poor water quality in the wetland system of Yellagonga Regional Park, although recent research suggests that water temperature and water levels are also contributing factors.

The overall health of the wetlands within the Yellagonga Regional Park is dependent on the nature and state of the surrounding catchment as well as historic and changing land use. The surface water catchment area for the wetlands extends into large areas of the City of Wanneroo as well as the City of Joondalup.

Ground water is likely to also have a significant impact on the water quality within the wetlands of the Yellagonga Regional Park. Ground water flows from East to West and surface water flows through the wetlands within the park in a Northerly direction. Previous land uses such as market gardens to the East, inappropriate fertiliser use and the Wangara industrial area, which is non-sewered in part, are likely to impact overall water quality of the wetland system.

The partnership was established as it is considered that the midge issue emanates from the surrounding catchment areas, including historical and current land use, and requires the expertise and resources of the three agencies to be integrated.

2.0 STATEMENT OF PURPOSE

A partnership agreement (2020-2025) for the management of nuisance midge within the wetland system of the Yellagonga Regional Park.

3.0 PARTNERS

The partners of the Midge Management Strategy Partnership Agreement 2020-2025 are:

- **Department of Biodiversity, Conservation and Attractions (DBCA)**
- **City of Wanneroo (CoW)**
- **City of Joondalup (CoJ)**

4.0 OBJECTIVES

The Midge Management Strategy Partnership Agreement 2020-2025 (the Midge Agreement) is designed to encourage an effective and sustainable partnership, for the purpose of managing nuisance midge within the wetland system of the Yellagonga Regional Park.

The Midge Agreement objectives are:

- 4.1 For control and management of nuisance midge within the wetland system of the Yellagonga Regional Park, through funding midge larvae and water monitoring, nuisance reduction using pesticide application when required, other intervention strategies, research projects in an effort to better understand the factors contributing to midge plagues and public information and education.
- 4.2 To arrange for the allocation, management and administration of funds for the strategy.

5.0 ACTION PLAN

The *Midge Management Strategy Action Plan (2020-2025)* (the Action Plan) forms part of the Midge Agreement and incorporates actions, responsibilities, timing and funding arrangements.

6.0 PARTNERSHIP PRINCIPLES

OVERARCHING PRINCIPLE

A commitment to improving cooperation, communication and collaboration between the State and local government agencies, to enhance sustainable social, environmental and economic outcomes for the management of nuisance midge within the wetland system of the Yellagonga Regional Park.

GENERAL PRINCIPLES

A commitment to:

Partnerships

- Recognise that partnerships are essential to achieve sustainable social, environmental and economic outcomes for the control and management of nuisance midge within the wetland system of the Yellagonga Regional Park.
- Be flexible and open to new approaches in implementing the Midge Agreement.
- Be sensitive and responsive to the needs and constraints of all partners.

Roles and Responsibilities

- Identify and understand the roles and responsibilities of both spheres of government.
- Ensure that these roles and responsibilities are considered and respected in all decisions.
- Recognise and respect the role that each play in enhancing sustainable social, environmental and economic outcomes for the control and management of nuisance midge within the wetland system of the Yellagonga Regional Park.

Communication

- Open and timely communication on issues of relevance to the Midge Agreement.
- Recognise the need for confidentiality of discussions until a mutually agreed time.
- Recognise that State and Local governments may use different processes to communicate with constituent groups.

Consultation

- Purposeful consultation at mutually agreed stages to facilitate understanding and agreement.
- Recognise and account for the different decision-making processes of both spheres of government.

Service Delivery

- Continual improvement in the efficiency, effectiveness, timeliness and appropriateness of the Midge Agreement.

Outcomes

- Agreed actions and responsibilities as stated in the Action Plan.
- Promote a realistic approach to funding and resource issues.
- Contribute resources and expertise to the Midge Agreement.

Accountability

- A transparent approach where changes to roles, responsibilities and budgets are negotiated and mutually agreed and resources necessary to implement change are identified.
- Undertake open assessments of the effectiveness of the Midge Agreement.
- Have clearly defined reporting, dispute resolution and review mechanisms.

7.0 SCOPE OF THE AGREEMENT**7.1 Responsibilities:**

The Department of Biodiversity, Conservation and Attractions and the City of Wanneroo together with the City of Joondalup have shared responsibilities for the management of nuisance midge within the wetland system of the Yellagonga Regional Park.

7.2 Commitment:

The partners of the strategy have agreed to commit to a further period of five (5) years under the Midge Agreement, with all partners maintaining the existing shared cost agreement.

7.3 Funding Percentage:

The Department of Biodiversity, Conservation and Attractions will contribute 50 percent of the funding and the City of Joondalup and the City of Wanneroo will each contribute 25 percent of the funding.

7.4 Budget:

The budget consists of an annual total of up to \$187,000 with the State Government contributing up to \$93,500 per annum and the Local Government partners each contributing up to \$46,750 per annum, comprising of the following:

7.4.1 Monitoring:

Funding to support a larval monitoring program to provide quantitative data. This will be considered for when treatments are required and to ensure optimum effectiveness. This program will also involve a water-monitoring program to provide information on the physical and chemical characteristics of the lake water, to determine the lake's nutrient status and habitat factors influencing the midge population. Sampling of surface water for nutrient analysis will be in consideration of the activities undertaken in association with the Yellagonga Integrated Catchment Management Plan.

Monitoring also includes equipment costs and watercraft maintenance/repair.

7.4.2 Nuisance Reduction:

Funding for chemical treatment of the wetland system of the Yellagonga Regional Park. Lake Joondalup to have a maximum of two (2) treatments per year. Lake Goollelal to have a maximum of one (1) treatment per year.

Any additional treatments will require approval from the Director General, Department of Biodiversity, Conservation and Attractions.

The effectiveness of S-Methoprene for the control of midge at Lake Goollelal will continue to be observed.

Nuisance reduction can also involve other intervention strategies to reduce the reliance on chemical treatment.

Determining factors for treatment shall include high numbers of midge larvae and a verified adult midge nuisance.

7.4.3 Research:

Funding for research projects to facilitate a better understanding of the factors contributing to seasonal midge plagues within the wetland system of the Yellagonga Regional Park, evaluating alternate intervention strategies for control of midge and an understanding of the nutrient contributors within the catchment.

7.4.4. Public Information and Education:

Funding public information and education to assist the community with the management of nuisance midge. This may include responses to midge nuisance complaints, engaging with the public and maintaining information.

8.0 MANAGEMENT

8.1 General Management:

8.1.1 A Midge Steering Group is established between the Department of Biodiversity, Conservation and Attractions, the City of Wanneroo and the City of Joondalup. The purpose of the Midge Steering Group is to discuss and make recommendations on any issues pertaining to the Midge Agreement. Meetings will be held as required, to discuss the management process of the Midge Agreement.

8.1.2 The Manager of Regional Parks Unit of the Department of Biodiversity, Conservation and Attractions, the Coordinator Health Services of the City of Wanneroo and the Principal Environmental Health Officer of the City of Joondalup are the representatives of each of the partner agencies and are responsible for exercising any decision-making powers.

8.2 Financial Management:

8.2.1 On signing the Midge Agreement, the partners will ensure the availability of the required funds for the duration of the Midge Agreement.

8.2.2 For the purpose of transparency in process and accountability, the City of Wanneroo will be responsible for coordinating the invoicing of expenditures incurred in implementation of the Midge Agreement. The remaining partners will ensure that funds are available and will be invoiced on all expenditures in accordance with the Action Plan, as outlined in the Midge Agreement.

8.2.3 All funds are to be acquitted on an annual basis and not carried over.

9.0 REVIEW

9.1 The Midge Steering Group will meet annually to discuss and review the details of the Midge Agreement and accompanying Action Plan. All actions outlined in the Action Plan and related outcomes of each midge season shall be documented and provide feedback on the effectiveness of the Midge Agreement.

Review date: **Annually**

9.2 An annual financial report is to be produced by the City of Wanneroo and presented to all partners following each midge season, capturing all expenditures of the Midge Agreement. The report will assist in reviewing the financial management of the Midge Agreement and consider any funding arrangement increases for future budgets.

Review date: **Annually**

9.3 Prior to the Midge Agreement expiring on 30 June 2025, it will be required to initiate a meeting inviting all partners to review the possible renewal of the Midge Agreement for a further five (5) year period.

Review date: **October 2024**

10.0 DISPUTE RESOLUTION PROCESS

Should a dispute arise between any of the partners of the Midge Agreement on a particular issue, the following resolution process should be followed:

10.1 The partners are required to meet to discuss the issue and will use their best endeavours to negotiate a mutually acceptable resolution.

10.2 Where such a resolution is not successful, the Chief Executive Officers (local government parties) and the Director General (State government party) or a nominee of each of these parties will meet to consider the areas of disagreement and seek a resolution.

11.0 BREAK CLAUSE

11.1 The Midge Agreement will operate from the date of signing to 30 June 2025.

11.2 Prior to this date the partners may elect to:

11.2.1 Modify the Midge Agreement; or

11.2.2 Terminate the Midge Agreement;

by written mutual agreement.

11.3 Any amendments/modifications or request for termination must be proposed in writing and addressed to all partners of the Midge Agreement for review and possible adoption. The decision will need to be a unanimous vote amongst all the partners.

12.0 AGREEMENT IN GOOD FAITH

The partners of the Midge Agreement will commit to an effective and sustainable partnership for the purpose of managing nuisance midge within the wetland system of the Yellagonga Regional Park.

Signature: _____ **Date:** _____

CHIEF EXECUTIVE OFFICER
City of Joondalup

Signature: _____ **Date:** _____

CHIEF EXECUTIVE OFFICER
City of Wanneroo

Signature: _____ **Date:** _____

DIRECTOR GENERAL
Department of Biodiversity, Conservation and Attractions

Midge Management Strategy Action Plan 2020-2025

Item	Responsible Parties	Action	Timing
Formation of a Midge Steering Group	All	A Midge Steering Group is established between the Department of Biodiversity, Conservation and Attractions (DBCA), City of Wanneroo (COW) and City of Joondalup (COJ). The purpose of the Midge Steering Group is to discuss and make recommendations on any issues pertaining to the Midge Agreement.	Upon implementation of the Midge Management Strategy Partnership Agreement 2020-2025.
Scheduling of midge larvae monitoring	DBCA	Midge larvae monitoring is to be pre-arranged with partner agencies. The commencement, frequency and conclusion of sampling activities is considered on an as needs basis.	As required.
Undertaking midge larvae monitoring	All	<p>A midge larval monitoring program is undertaken to better monitor trends and to predict when treatments will be necessary and most effective.</p> <p>Lake Joondalup requires officers from DBCA, CoW and CoJ. Lake Goollelal requires officers from DBCA and one officer from CoW and CoJ on an alternating basis. DBCA to provide the watercraft operator.</p> <p>Midge larvae results to be recorded.</p>	Larvae monitoring is seasonal (typically between August and January) and on an as needs basis.
Identification of midge larvae species	CoJ	Midge larvae species identification is to be carried out as required and results recorded.	As required.
Water monitoring	All	<p>Water monitoring will provide information to better understand the lake's nutrient status and habitat factors influencing the midge population. No nutrient sampling will be necessary where existing monitoring is being carried out through projects of the Yellagonga Integrated Catchment Management Plan (YICMP).</p> <p>Water monitoring will include temperature, pH, conductivity and water level on each midge larvae monitoring occasion.</p>	<p>Water sampling for analysis of chemical parameters to only occur where YICMP does not capture required information. This would form part of a research project.</p> <p>Temperature, water level, pH and conductivity will be recorded at each larvae monitoring occasion.</p>

Consideration for treatment	All	Each partner agency shall consider midge larvae monitoring results, customer interactions and a verified prevalence of adult midge. Treatment to occur by unanimous decision.	As required.
Undertaking treatment	All	<p>A suitable treatment date to be determined in consultation between partner agencies.</p> <p>A single treatment of S-Methoprene may consist of partial applications carried out on separate occasions. Partial applications of S-Methoprene should not result in the same area of a lake being re-treated within 30 days. Treatment shall be in accordance with the APVMA permit conditions.</p> <p>CoW to confirm arrangements for chemical availability, and helicopter availability if applicable.</p> <p>Each partner agency to contact any resident on a chemical hypersensitivity notification register.</p> <p>Assistance to be provided by all partner agencies.</p>	As required.
Watercraft maintenance	All	Servicing/repair of watercraft used for midge larvae monitoring.	As required.
Research	All	<p>Arrangements to be made for midge related research projects that may include;</p> <ul style="list-style-type: none"> • The review of existing data to determine correlations between water quality, temperature, weather and other factors, with midge larvae numbers. • Evaluating the feasibility for alternate intervention strategies. • Further research into the influence of water quality, habitat, or other factors on the midge life cycle. • Research relating to predictive capabilities for midge emergence that could enable better control. • Research relating to the nutrient budget of the wetlands and linkage with nutrient contributors within the catchment. • The effectiveness of S-Methoprene to control midge larvae within Lake Goollelal. • The impact of the YICMP revegetation program on improving water quality. <p>Research projects to be in consideration of existing or future projects associated with the YICMP. Funding can be utilised in</p>	Midge research projects will typically be annually or in stages over consecutive financial years.

		support of YICMP projects that have midge related synergies, where appropriate.	
Public Education	All	Public education will include; <ul style="list-style-type: none"> • The development and/or distribution of midge related information. • Providing electronic access to information including websites. • Responding to and maintaining records of resident enquiries and concerns on adult midge numbers. • Encouragement for residents to focus on the overall care of the catchment. 	As required
Yellagonga Regional Park Advisory Committee Meetings	DBCA	Attend the Yellagonga Regional Park Community Advisory Committee, to provide any information updates on midge management activities.	Meetings held quarterly
Elected member and Member of Legislative Assembly enquiries	All	The City of Wanneroo and City of Joondalup will respond to enquiries by their elected members. The DBCA will respond to enquiries by the Members of the Legislative Assembly.	As required
Reporting	All	Maintain an annual report of midge related activities, that includes the capture of all expenditures.	Annually

Budget Allocation (annual)		
Funding Arrangements	Item	Amount
<p>State and local governments have agreed to providing, allocating and managing funding for the Midge Agreement.</p> <p>Funding allocation is based on a 50% contribution from the DBCA and 25% contribution each from the City of Wanneroo and the City of Joondalup.</p> <p>Funding arrangements consider the use of S-Methoprene for Lake Goollelal.</p> <p>Other intervention strategies may be considered as part of the budget allocation for treatment.</p> <p>The total budget reflects the worst-case scenario with maximum treatments and highest application rate relative to water levels.</p>	Graybate/ S-Methoprene	\$118,000
	Treatment application (eg helicopter usage – considers 4 treatments of Lake Joondalup and 2 treatments of Lake Goollelal)	\$28,000
	Research projects	\$30,000
	Monitoring / Equipment/ Water Craft Maintenance (includes equipment for midge and water sampling, and water testing)	\$6,000
	Public Education	\$5,000
	TOTAL	\$187,000