

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2023 City of Kwinana Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications to foreshore areas, nutrient management, water quality monitoring, development control and nutrient education. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2023 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.

### 2023 Overall Best Management Practice Score – 83% EXCELLING

The City of Kwinana has excelled in implementing nutrient Best Management Practices in 2022/23. The City does not have any area within the Swan Canning Catchment and therefore does not contribute nutrients to the Swan Canning River System. It does however have important wetlands and ocean within or adjacent to its boundaries and should be mindful of the nutrients entering these waterbodies. Further improvements can be made in the areas of nutrient monitoring, fertiliser applications, nutrient management, water quality monitoring and development control.

#### RESPONSE KEY:

- BMP has been achieved
- BMP has NOT been achieved
- Not Applicable
- Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

- Excelling
- Above Average
- Average
- Below Average
- Unsatisfactory

## NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Were regular soil nutrient tests, soil moisture tests &/or leaf tissue analyses conducted in any grass/turf areas?	YES	EXCELLING
Was analysis conducted by a lab affiliated with ASPAC?	YES	
Was plant available phosphorus in the soil measured using an appropriate test?	YES	
Were rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City completed soil tests and leaf tissue analysis of sports fields and soil tests of irrigated parks, with both of these areas being fertilised and irrigated. Despite fertilising and irrigating foreshore areas, no testing was undertaken in these areas. It is recommended that the City undertakes regular soil testing and leaf tissue analysis of all turf areas that are fertilised and moisture testing if these areas are irrigated.

## FORESHORE FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there grassed/turfed foreshore areas within the LGA?	YES	AVERAGE
Was fertiliser added to grassed/turfed foreshore reserves?	YES	
Did the fertiliser contain phosphorus?	NO	
Was it a controlled release solid fertiliser or a liquid fertiliser applied to foliage?	NO	
Was there a buffer zone around waterbodies in which no fertiliser was applied?	YES	
Was any nutrient testing completed of foreshore areas?	NO	

The City reported in the survey that they did not apply fertiliser to foreshore areas, however, provided details of the amounts applied to these areas so their response was changed. Areas outside the buffer zone should be fertilised and irrigated according to regular soil and moisture testing and leaf tissue analysis. Any fertiliser that is applied should be phosphorus free and a controlled release, low water soluble fertiliser if in solid form or applied to foliage and left to dry if a liquid.

#### General Fertiliser Recommendations:

It is recommended that fertiliser only be applied in spring and autumn as summer fertilising encourages the overuse of water and turf may grow excessively, while fertiliser applied during winter can be washed into stormwater drains or leached into groundwater. Many grass species are also dormant or semi-dormant in winter. Employees involved in turf management would benefit from attending SERCULs Fertilise Wise Fertiliser Training in 2024. Employees involved in turf management would benefit from attending SERCULs Fertilise Wise Fertiliser Training in 2024.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Were structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Were non-structural measures in place to prevent nutrients from grass clippings entering waterbodies directly or via stormwater drains?	YES	
Were there deciduous trees in parks and streetscapes?	YES	
Were non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies directly or via stormwater drains?	YES	
Were non-structural measures in place to prevent nutrients from sediment entering waterbodies directly or via stormwater drains?	YES	
Was a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Was there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the practice of not planting deciduous trees on road verges or near water bodies be continued. A NIMP should be implemented for streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Were wetlands regularly monitored for nutrient levels?	YES	BELOW AVERAGE
Were stormwater drains regularly monitored for nutrient levels?	NO	
Were compensating basins regularly monitored for nutrient levels?	NO	

The City monitored nutrient levels in wetlands, but did not report the results to the local community. It is recommended that the City also regularly monitor stormwater drains and compensating basins and report all water quality monitoring results to the local community. Any monitoring program implemented should be ongoing to identify issues as they arise. SERCULs Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Were there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	EXCELLING
Did the LGA impose conditions on development which included Nutrient and Irrigation Management Plans (NIMPs)?	YES	
Did the LGA have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City continue to implement their current practices, with the exception that they monitor developments for compliance and prosecute developers found to be non-compliant.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Were dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Were measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Were ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	
Was education provided about nutrient sources to waterways?	YES	

It is recommended that the City continue to implement their current practices. In addition to what is currently being undertaken, SERCUL has relevant information on its website that can be linked to and can be engaged to deliver presentations about nutrients and their impact on waterways to schools, business and community groups through its Phosphorus Awareness Project. For more information on this education program and how it can assist the City with nutrient education contact Natasha Bowden on 9458 5664.