

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

20  
23

## Shire of Serpentine-Jarrahdale

### 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 – 67% ABOVE AVERAGE

The Shire of Serpentine-Jarrahdale has been above average in implementing nutrient Best Management Practices in 2022/23. Further improvements can be made in the areas of fertiliser applications, nutrient management, water quality monitoring and nutrient education.

#### 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 Shire conducted soil tests, leaf tissue analysis and moisture testing of sports fields and irrigated parks, both of which were fertilised and irrigated. It is recommended that regular testing and analysis continue in all areas that are fertilised and irrigated.

## FORESHORE FERTILISER APPLICATIONS

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

The Shire did not apply fertiliser to foreshore areas and it is recommended that this practice continue.

#### General Fertiliser Recommendations:

Quick release fertiliser was being added to active turf areas at rates above the maximum recommended single application rate of nitrogen of 40 kg/ha. It is recommended that the Shire not apply fertiliser at this rate in a single application, but if this amount of fertiliser is required they do multiple applications over a period of time at a lower rate. Employees involved in turf management would benefit from attending SERCUL's Fertilise Wise Fertiliser Training in 2024.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Were structural BMPs in place to reduce nutrients entering rivers and wetlands?	YES	ABOVE AVERAGE
Were non-structural measures in place to prevent nutrients from grass clippings entering waterbodies directly or via stormwater drains?	YES	
Are 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?	NO	

It is recommended that no further deciduous trees be planted on road verges or near waterbodies. A NIMP should be implemented for streetscapes and a policy to use local native plants as the first choice in landscaping be put in place.

## WATER QUALITY MONITORING

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

It is recommended that the Shire implement a water quality monitoring program for wetlands, stormwater drains and compensating basins and report the results to the local community. 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 Shire continue to implement their current practices, including monitoring developments for compliance. If developers are found not to be in compliance they should be prosecuted.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Were dog poo bins and bags provided in parks and foreshore reserves?	YES	AVERAGE
Were measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	NO	
Were ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	
Was education provided about nutrient sources to waterways?	NO	

It is recommended that the Shire implement measures to educate the public about not feeding bread to waterbirds in foreshore reserves and parks and provide education to residents, relevant businesses and schools about the impact of all nutrient sources, including fertiliser, pet faeces, grass clippings, leaves, sediment, septic tanks and detergent, on waterways and how they get there (ie. via runoff, stormwater drains and groundwater). SERCUL has relevant information on its website that can be linked to and can be engaged to deliver presentations to schools, business and community groups through its Phosphorus Awareness Project. For more information on this education program and how it can assist the Shire with nutrient education contact Natasha Bowden on 9458 5664.