ANNUAL NUTRIENT SURVEY for Local Government Authorities

City of Mandurah
Nutrient Management Score Card 2020

River systems, and many wetlands, are suffering from regular, sometimes toxic, algal blooms. These blooms occur due to the excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows. Local authorities are responsible for nutrient use on turfed areas, reserves 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 (LGA's) in Perth, are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The results from the questions asked in the survey have been used to provide these Score Cards for each LGA that responded and clearly show where and how improvements can be made. LGA's should also refer to the *Annual Nutrient Survey for Local Government Authorities Results 2020* report (*www.sercul.org.au/fertilisewise*) for further recommendations on how to improve nutrient Best Management Practices (BMP's). The City of Mandurah's results are not included in the report as it focuses on LGA's within the Perth area, however they have specifically asked to receive a score card, so one is provided based on their responses to the survey.

The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from these sections are shown below, for the last five years, so that the LGA knows exactly how they responded and where improvements can be made. Recommendations on how to improve practices have been made where needed.

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. We have provided an overall score based on results provided since each LGA started participating in the survey, those for the last 5 years and those for this year. This will allow LGA's to see how they are doing over the long-term, short-term and at the current time. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.

Best Management Practice Scores

Overall (2017 - 2020): 74% - Above Average **Last 5 years: Not Applicable** **2020: 82% - Excelling**

This is the forth year that the City of Mandurah has opted to participate in the survey and the overall score has been determined from the results of these four surveys only. The City have been above average in adopting Best Management Practices overall and are excelling in 2020. An incorrect negative response to one question was provided in last years survey. This result has been altered and any change in score when compared to last years Score Card reflects these changes. Further improvements can be made in the areas of fertiliser applications and nutrient management.

Key for following tables:

Best management practice has been achieved | Best management practice has not been achieved | No response | Not Applicable

Nutrient Monitoring

Question Number	Question	Year				
		2016	2017	2018	2019	2020
1	Conducted soil tests					
3	ASPAC analysis					
4	Colwell test used					
5	PRI measured					

Over the last four years, the City of Mandurah has excelled in nutrient monitoring. It is recommended that they continue to implement their current practices. It is pleasing to see that the City has added nutrient monitoring of foreshore reserves to their program since last year and it is recommended that this continue.

Fertiliser Applications

Question Number	Question	Year				
		2016	2017	2018	2019	2020
7(b)	Fertiliser used in foreshore areas					

The City is using fertiliser on foreshore reserves and parks. It is recommended that before applying fertiliser to these areas soil, leaf tissue and moisture tests are conducted. If nutrients are required then controlled release and low water soluble fertilisers should be used. Fertiliser should not be applied in winter months. A 50 metre buffer zone should be established between fertilised areas and waterways.

Analysis of Question 8 from the 2020 survey indicated that the City is using slow release inorganic, no phosphate inorganic and foliar fertilisers for their turf areas and is fertilising using multiple applications through the seasons, including winter and summer. The average application rate of nitrogen in the Sure Green Gold fertiliser exceeds the recommended application rate which should generally not exceed 40 kg/ha of nitrogen in one application. It is recommended that the City fertilises according to the results of nutrient monitoring, not exceed the recommended application rates of nutrients, not fertilise in winter and only in summer if nutrient testing indicates that it is required.

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Nutrient Management Score Card 2020 *continued*

Nutrient Management

Question Number	Question	Year				
		2016	2017	2018	2019	2020
10(a)	Grass clipping measures					
11	NIMP for streetscapes					
12	Local plants policy					
13(b)	Deciduous tree leaf removal					
14	Dog poo bins					

Overall, the City has scored an average result in nutrient management. It is recommended that the City implements a Nutrient and Irrigation Management Plan (NIMP) for their streetscapes and a local plants policy.

Deciduous trees are found in the City's area. It is recommended that no further deciduous trees be planted and that street sweeping be increased during periods of heavy leaf drop. The 2019 answer for Question 13b) was changed from a no to a yes in light of clarification of the measures adopted by the 2020 responder.

Nutrient Education

Question Number	Question	Year				
		2016	2017	2018	2019	2020
15(a)	Discourages public waterbird feeding					
16(a)	Provides fertiliser advice to rate payers					

Overall, the City has excelled in nutrient education. It is recommended that the City continue to implement it's current practices.

Water Quality Monitoring

Question Number	Question	Year				
		2016	2017	2018	2019	2020
17(a)	Monitors wetlands for nutrients					
17(b)	Monitors stormwater drains for nutrients					
17(c)	Monitors comp basins for nutrients					

Overall, the City is scoring above average in the area of water quality monitoring, however has excelled in 2020. It is recommended that they continue to implement their current practices and report all results to the community.

Development Control

Question Number	Question	Year				
		2016	2017	2018	2019	2020
18(a)	NIMP developers conditions imposed					
19	Town Planning env enforcement policies					

Overall, the City has excelled in the development control area. It is recommended that they continue to implement their current practices but also monitor developments for compliance. If developers are found not to be in compliance they should be prosecuted as new developments are potentially major sources of nutrients to groundwater and waterways.

For further information please contact Natasha Bowden, South East Regional Centre for Urban Landcare on 9458 5664 or email natashabowden@sercul.org.au.

The Annual Nutrient Survey for Local Government Authorities Results 2020 Report is available at *www.sercul.org.au/fertilisewise*