Date: 22 June 2020

OverseerFM version 6.3.3 data input protocols for Lake Rotorua catchments

Purpose

This memo is intended to enable landowners, consultants and BOPRC staff to take a consistent and robust approach to Plan Change 10 and Rule 11 OverseerFM assessments. The protocols will be published on-line at www.rotorualakes.co.nz.

This purpose of this document is to outline the format in which an OverseerFM analysis should be submitted to Council and the Bay of Plenty Regional Council OverseerFM data entry protocols to be used when developing an analysis.

The format in which an analysis is named allows Council to search for the relevant analysis for consenting and monitoring purposes and an automated process comparing analyses to be performed. The status of the analysis identifies for Council the stage at which each analysis is at enabling an efficient review and assessment process.

The Bay of Plenty Regional Council OverseerFM data entry protocols ensure consistency in the regulatory context of assessing the property nitrogen (N) losses in Lake Rotorua catchments affected by nutrient rules.

Detailed property and catchment GIS data from Council is used to ensure a robust and consistent approach to some input parameters.

Disclaimer

The protocols described in this memo are Bay of Plenty Regional Council's position and do not represent the views of Overseer Ltd in any way.

1. OverseerFM

To enable any analysis to be readily recognised by the landowner, Land Use Advisor (LUA) and BOPRC staff the following 'FM Naming Convention' and publication statuses should be used:

Farm and Analyses Naming Convention

The table above relates to analyses for PC10 and Rule 11.

Farm Name	PIN Farm Name e.g. 05 01 999 00 Sunny Pastures
Naming Structure – Predictive Analyses	PIN Farm Name NMP Period e.g. 05 01 999 00 Sunny Pastures NMP 1722 05 01 999 00 Sunny Pastures NMP 2227
Naming Structure – Year End	Defined by OverseerFM e.g. Year ending 2019
Publishee's Farm Identifier Structure	PIN e.g. 05 01 999 00
Publishee's Reference	RMYY-xxxx e.g. RM19-0001 Resource Consent Number (this can be added once a resource consent has been granted); PAYY-xxxx e.g. PA19-0001 Permitted Activity number; LR R7 - for annual land use records for 10-40ha properties

Publication Statuses of Analyses to Bay of Plenty Regional Council

When an analysis is ready to be submitted to BOPRC, whether for a consent application (supported by an NMP), or year-end (consent monitoring) the statuses are defined below.

Status	*Used by*	*Description*
Submitted	Land Use Advisor	When an analysis is published to BOPRC by a land use advisor (or landowner), whether year end (monitoring) or predictive (NMP/Consent application).
Reviewing	Council	Indicates BOPRC has started reviewing the publication and prevents publication of any changes made to the analysis to BOPRC.
Returned	Council	When an analysis needs updating by a LUA or landowner. BOPRC will alter the status to 'returned' to enable changes to be made and the analysis re-published to BOPRC (and the publication becomes version 2 and so on).
Closed	Council	Analysis accepted by BOPRC.

2. Bay of Plenty Regional Council Protocols on OverseerFM data input

These protocols must be read in conjunction with the OverseerFM User Guides.

Input	BOPRC protocol
Creating a Farm Account	Use Region: Central Plateau.
Creating Blocks	Not relevant if an imported .xml. Do not draw blocks per OverseerFM User Guide. Click Create Block, scroll down to bottom of map, Click Save, Enter Block details where applicable from the data attributes supplied by BOPRC.
Creating Blocks	Grazed tree blocks: Where grazed trees exist on the property, a specific pastoral block should be identified to allow for different management practices and lower pasture productivity. No reference is made to grazed tree blocks in the OverseerFM Best Practice Data Input Standards (BPDIS) sections of the User Guide but they are an existing block type in many properties in the Rotorua catchment. Note that scattered gorse with stock access should be treated similarly to a grazed tree block. Gorse blocks: Blocks with dense gorse and no practical stock access should be entered as 'Trees and scrub' and native.
Creating Blocks	Wetland blocks: Where a fenced wetland exists on the property, BOPRC protocols require that this is entered as a 'riparian' block, and BOPRC recommends that it is identified as a wetland in the block name. Where a wetland is unfenced, this should be entered as a pasture block with an appropriately reduced level of 'relative productivity', consistent with Section 7.5 of the Input Standards and this memo.
Creating Blocks	House blocks[3]: should be entered for ALL properties where there is a house. BOPRC "House block" requirements; For number of people in house a standard occupancy of 3 people per dwelling is used. Cultivated area: a standard area of 100 m^2 cultivated land per dwelling is used. This is then calculated as a percentage of the house block. For a 'house block' that comprises multiple self-contained dwellings, the number of people and area of cultivated land needs to be multiplied by the number of self-contained houses in the block.to be multiplied by the number of houses in the block. Composting Toilet - Do not enter a composting toilet under "Reticulation or Compost" as the sewage management method. Use 'On-site septic tank package'.

Input	BOPRC protocol
Creating Blocks	Effective area: BOPRC does not require raceways and lanes to be blocked out separately i.e. raceways and lanes can be part of adjoining blocks.
Creating Blocks	Distance from coast: In Rotorua the prevailing wind direction is split between the north east and the south west. Consider north east to be the prevailing wind direction and measure the 'distance from coast' from the Bay of Plenty coastline. The distance from the coast is typically between 30-60 km for properties within the Lake Rotorua catchment.
Creating Blocks	Climate data[1]: For blocks that require Climate data select 'Enter climate location' then enter latitude and longitude from the data attributes supplied by BOPRC. This option enables the user to enter the latitude and longitude for each Overseer block based on the GIS-calculated mid-point for each block.
Adding soils to the block[2]	Select one soil type only. The dominant soil type will be provided by BOPRC in data attributes. To enter soil data Click edit block, Click add new soil, tick new S-Map and enter block soil type (sibling name) from the data attributes supplied by BOPRC. Then check that the soil profile details and the soil properties align with the data attributes supplied for the sibling name. Change as required.
Pasture	Topography[4]: The slope for each block is calculated geospatially from the farm block map developed with Council and the landowner's Land Use Advisor. BOPRC data attributes use the following slope categories: <table><tr><td>Flat 0-7.99°</td><td>Rolling 8 -15.99°</td><td>Easy Hill 16- 25.99°</td><td>Steep Hill > 26°</td></tr></table>
Pasture/Crops	Plantain Under Block/Land use select pasture type 'Plantain'. Enter Percentage of Plantain (5-60%) and primary Land Use 'Pasture' or 'Cut and carry'. Significant nitrogen reductions are being proposed for pastures with a high percentage of plantain. To ensure that landowners are getting the reductions that they are entitled to under various levels of plantain data is to be submitted with the OverseerFM analysis. The methodology used is to be described and consistent with best practice pasture sampling and supporting data[5] will be required to be submitted with the analysis.
Fodder crop block-specific	If the block does has a fodder crop rotating through it follow the Overseer Data Input Standards i.e. check the "Cultivated in last 5 years" box.
Susceptibility to pugging	Select 'rare' for all soils defined as well-drained in S-Map.
Animal Distribution	Relative productivity: Use recommendation 2 in terms of relative productivity differences between blocks, ensure this approach is also applied to blocks of "grazed trees" and "grazed wetlands".

Animal Distribution	<u>Distribution of Animal classes within blocks:</u> Do not use the Dairy Industry recommendation to select 'Same as ratio of total animal intake'.
Adding Livestock	If mature weight or weight gain is known enter these as well as age at start. If weights are not known use age at start only. The inclusion of age at start when weights are entered does not override the weights but helps with interpretation of the stock calendar.
Back to back fodder cropping	For situations of back to back fodder cropping (greater than 12 months rotation) Overseer recommendation is to add the crop as a fodder crop.
Crop data inputs	Select 'typical yield' for crops unless there is supporting evidence for an alternative yield amount.

[1] For Overseer analyses that form the basis of consent applications, or year-end monitoring analyses, BOPRC will provide the latitude and longitude for each block once a farm map has been supplied.

[2] BOPRC uses soil data generated by Landcare Research and provided via S-map dated 2014. At this stage the BOPRC S-map data is not being changed with changes to the national database. This policy will be reviewed at the next science review.

[3] A house block that is 1000 m^2 (or 0.1 ha), the percentage of the block that is cultivated = 100m^2/1000m^2 = 10%. Where there is more than one house on the property, the areas of each house and garden/section can be summed, and entered into Overseer as a single "house" block.

[4] BOPRC will provide the block slope data for the farm block map to 2 decimal places. Where one Overseer block comprises several geographically separate part-blocks, slope is calculated based on the average slope of all of the part blocks.

[5] Map identifying the paddocks with plantain. The variety, individual data points recorded (see below) and the average submitted for the Overseer analysis.

Date	20/05/2020			30/05/2020			
Sample	Pdk 1	Pdk 2	Pdk 3	Pdk 4	Pdk 5	Pdk 6	Pdk 7
1	36	18	33	40	41	34	35
2	28	27	26	37	53	21	32
3	30	16	26	41	36	20	36
4	23	27	27	35	48	34	37
5	26	30	24	43	35	29	36
6	36	30	38	38	47	18	33
7	37	33	27	29	50	21	41
8	22	29	31	33	42	29	37
9	33	23	39	40	55	20	37
10	39	16	25	35	53	26	34
11	21	32	38	31	44	27	33
12	30	27	28	40	42	28	48
13	37	17	21	39	53	18	43
Average	31	25	29	37	46	25	37

Average across all paddocks (entered into OverseerFM) = 33%