



Regulation 85 - Cooling towers

Guidelines for data submission

Regulation 85.6(2)(a) mandates that cooling towers report the nutrient monitoring data collected November 1, 2012 through October 31, 2014 to the Water Quality Control Division (WQCD) by February 28, 2015. Unlike other nutrient monitoring data, the number of cooling towers is small enough that a standardized report form is not necessary. However, your data must be submitted in an electronic format which allows for ready access; in other words, please submit data as a Microsoft Excel file, not a portable document format (pdf) file. WQCD has developed these guidelines to facilitate the data submission.

Required parameters

Cooling towers are required to report monthly data on flow, total phosphorus (TP), total inorganic nitrogen (TIN), and total nitrogen (TN) concentrations for both the inflow (cooling tower make-up) and discharge. In addition, if chemicals are added to the cooling tower (eg., de-scaling agents), then the amount added on a monthly basis and material safety data sheets (MSDS) for each added chemical must be reported.

Sampling information

Location: Please provide the location of each sampling point, including latitude/longitude and the waterbody name for the receiving waters.

Sampling Events: Please provide the date and time of each sampling event (ie., the date and time each nutrient sample was collected). Also please tell us the method of sample collection (eg., my samples were grab samples or my samples were composite samples collected over X number of hours).

Sampler/Data Contact: The facility's CDPS permit number should be clearly identified in the report. Also, please provide the name, phone number, and email address for the person at your facility who would be able to answer questions about your report.

Flow

Please report the daily average flow for the day on which samples were collected. Please include a description of how the flow was determined (eg., flow recorder, staff gage, etc.). Remember that we need flow measurements for both the inflow (make-up) and the discharge.

Analytical parameters (TP, TIN, TN)

Concentrations, in mg/L, of TP, TIN, and TN should be reported for both the inflow (make-up) and discharge. TN and TIN can be calculated from various components (see below), so please report the components if these are available.

Table 1. Acceptable combinations of parameters that can be used for reporting TN and TIN.

<u>Report TN as:</u>	<u>Report TIN as:</u>
TN	TIN
and/or	and/or
$\text{NO}_3 + \text{NO}_2 + \text{TKN}$	$\text{NO}_3 + \text{NO}_2 + \text{NH}_3$
$\text{NO}_5 + \text{TKN}$	$\text{NO}_5 + \text{NH}_3$

Please also report the method detection limit (MDL) and the lower reporting limit (LRL; often referred to as "LOQ," "RL," or "actual PQL achieved by laboratory") for all parameters.

The methods used to determine each analytical parameter (or component), as well as the laboratory which made the measurements should also be included in the report. If you switched laboratories and/or analytical methods during the monitoring period, then please indicate this in your report as well.

Added chemicals

Please include the rate at which these are added on a monthly basis. Also, please include an MSDS for each chemical added.

Cooling tower data submission

Please email your report to cdphe_nutrients@state.co.us by February 28, 2015.

Contacts at WQCD

For questions/concerns about your cooling tower nutrient monitoring data submission, please email WQCD staff at the email above, or contact one of the staff listed below:

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