

TOTAL DISSOLVED SOLIDS (TDS) DETERMINATION QUESTIONNAIRE AND SUBMITTAL GUIDE

Below is a list of data requirements and questions to be answered by an applicant seeking a TDS Determination from the DRBC under Section 3.10.4D.2 and Section 3.10.3A.1.b of the DRBC *Water Quality Regulations*. The *Water Quality Regulations* are available on the Commission's website at: <http://www.state.nj.us/drbc/regula.htm>.

Applicants requesting a TDS determination must submit this form along with the "Applicants Statement – Project Review Fee" form and the "Application for all Other Projects". Both of these forms are available on the Commission's website at: <http://www.state.nj.us/drbc/pjrev.htm>.

1. Supply historically representative or future projected data on average monthly and maximum daily wastewater treatment plant (WWTP) effluent flows. _____
2. Provide estimated/actual concentrations of TDS in the treated effluent (supply at least 12 months of data if available) both average monthly and maximum daily values. _____ Also, identify the ionic constituents of the TDS (i.e.: Na, Ca, SO₄, etc.) and the relative percentage of each as they constitute the total TDS. _____
3. Describe the existing (proposed) wastewater treatment facilities, including design capacity, types of units, expected performance and indicate if any part of the treatment process is expected to remove or add TDS to the effluent as a result of the type of treatment afforded the wastewater. _____
4. Can the manufacturing or treatment process be altered to reduce the level of TDS in the effluent? _____ Is the WWTP designed to meet EPA'S BPT/BAT/BCT effluent limitation guidelines for the facility's particular industrial classification? _____
5. What is the U.S.G.S. Q₇₋₁₀ low flow value for the receiving stream at the point of the effluent discharge? _____
6. What is the background TDS concentration in the receiving stream (at Q₇₋₁₀ conditions) above and below the point of effluent discharge? _____
7. Is there an observed/measured/expected mixing zone within the receiving stream or does mixing occur across the entire width of the stream? _____
8. Discuss the potential of off-line storage of wastewater in lined lagoons or tanks during the dry season for later discharge during higher streamflow conditions. _____

9. Identify the nearest downstream water user that draws water from the receiving stream for potable use/supply.

Name	Intake	
	Latitude (N)	Longitude (W)
	° ' "	° ' "

Are there any industrial water users downstream from the project outfall that would be affected by high TDS? _____

10. Information is needed that will enable staff to assess the effects of the discharge on the aquatic biota in the receiving stream. DRBC reserves the right to require the applicant to conduct a biological assessment of the receiving stream if the available data is not sufficient to assess the effluent's impacts. NPDES permits are now being written with biomonitoring requirements to determine the acute toxicity (96 hour LC50) in percent wastewater. Chronic bioassay testing requirements are required of some dischargers. Will any of the TDS constituents create an acute or chronic toxicity problem in and of itself separate from the physical effects of TDS on aquatic organisms? _____
11. If the discharge were to be conveyed to the next largest downstream water body to which the proposed receiving stream is tributary, what would be the effect on instream TDS in the larger receiving stream? _____ How many miles would the discharge have to be piped to reach the larger stream? _____ Would there be a problem in obtaining the necessary rights-of-way to traverse private and/or State lands/roadways, where necessary? _____
12. Could the discharge be put into an existing municipal sanitary sewer for conveyance to a local municipal sewage treatment plant, whose discharge flow could afford some dilution, and possibly eventual discharge to a larger receiving stream? _____ Is there an existing large capacity storm sewer nearby that could convey the treated wastewater to a larger receiving stream that would afford more dilution, thereby lessening the effect on the aquatic biota in the receiving waterbody? _____
13. Are there any upstream or downstream dischargers whose effluents are of sufficient quantity and quality to afford dilution of your discharge as they mix in the receiving stream? _____ Has consideration been given to the potential of merging the wastewaters via pipeline prior to discharging to the receiving stream? _____
14. What is the estimated cost to install Reverse Osmosis (RO) or some form of Ion Exchange to reduce TDS to a level whereby the amount of TDS left in the effluent, if discharged to the proposed receiving stream, would not cause the DRBC's Stream Quality Criteria for TDS (less than a 33% increase in the instream background TDS under Q₇₋₁₀ low flow conditions) to be violated? _____ Would disposing of the brine/regenerant resulting from the above treatment cause disposal problems and economic hardship? _____

15. Describe the projected time frame for construction of the project. _____ Is there any contaminated groundwater under the site and any off site migration occurring? _____ If so, how long do you estimate that the project will remain in operation until the contamination is either purged or no longer deemed to require treatment? _____

Applicant Name: _____

Contact Name and Title: _____

Mailing Address: _____

Phone: _____