



Be Right™

Lower Limits on Phosphates - What You Need to Know

Question: I understand that new, lower limits for phosphate discharge are coming soon. Is this so, and what are the changes?

Answer: Yes, water treatment facilities will need to plan for new lower phosphate discharge limits.

In Europe, the EU Water Framework Directive stipulates “good water quality” (for ortho-phosphate discharge limits of ~0.07 mg/l) for all surface waters by 2027, with member states required to develop plans to meet lower limits. For example, some Waste Water Treatment Plants (WWTPs) in Germany have been mandated to lower their phosphate effluent levels to 0.2 – 0.8 mg/l in 2018.

In the United States, states are taking varied but significant steps to reduce nutrient loads in their waters. These steps include coordination and collaboration with publicly owned treatment facilities, state drinking water partners, state agriculture departments, federal agencies, conservation offices, NGOs, the private sector, and other entities to reduce nutrient pollution.

For example, for states like Illinois and Wisconsin, the current limits in place are expected to go down to 0.5 mg/L in the coming couple of years. For a state like Wisconsin, discharging into the Great Lakes, the limits are expected to be the strictest in the country.

Question: What does this mean to me? Will my current equipment and processes allow my plant to remain in compliance?

Answer: Depending on your plant’s configuration, it’s likely that you do have options to meet the lower limits. For example, you might increase dosing to meet the lower limits. Plant managers will need to find ways to optimize either biological treatment, chemical treatment, or a combination of both to stay in compliance and within budget.



Question: What challenges might I expect in optimizing my measurements and treatment?

Answer: Plant managers will need to measure much lower thresholds, while ensuring accuracy of those measurements. Measuring at a lower range with higher accuracy will be key, so dosing can be calibrated without waste. Higher dosing results in higher costs and so does generating and disposing the precipitates.

Question: How soon will I see these changes take effect?

Answer: In parts of the EU, the lower limits are already in place, and being phased in with a goal of complete compliance by 2027. In the US, there is variation among states and regions in the timing of new regulations, with states like California, Colorado, Illinois, Iowa, Utah, and Wisconsin leading the way with lower limits taking effect between 2015 – 2020.

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